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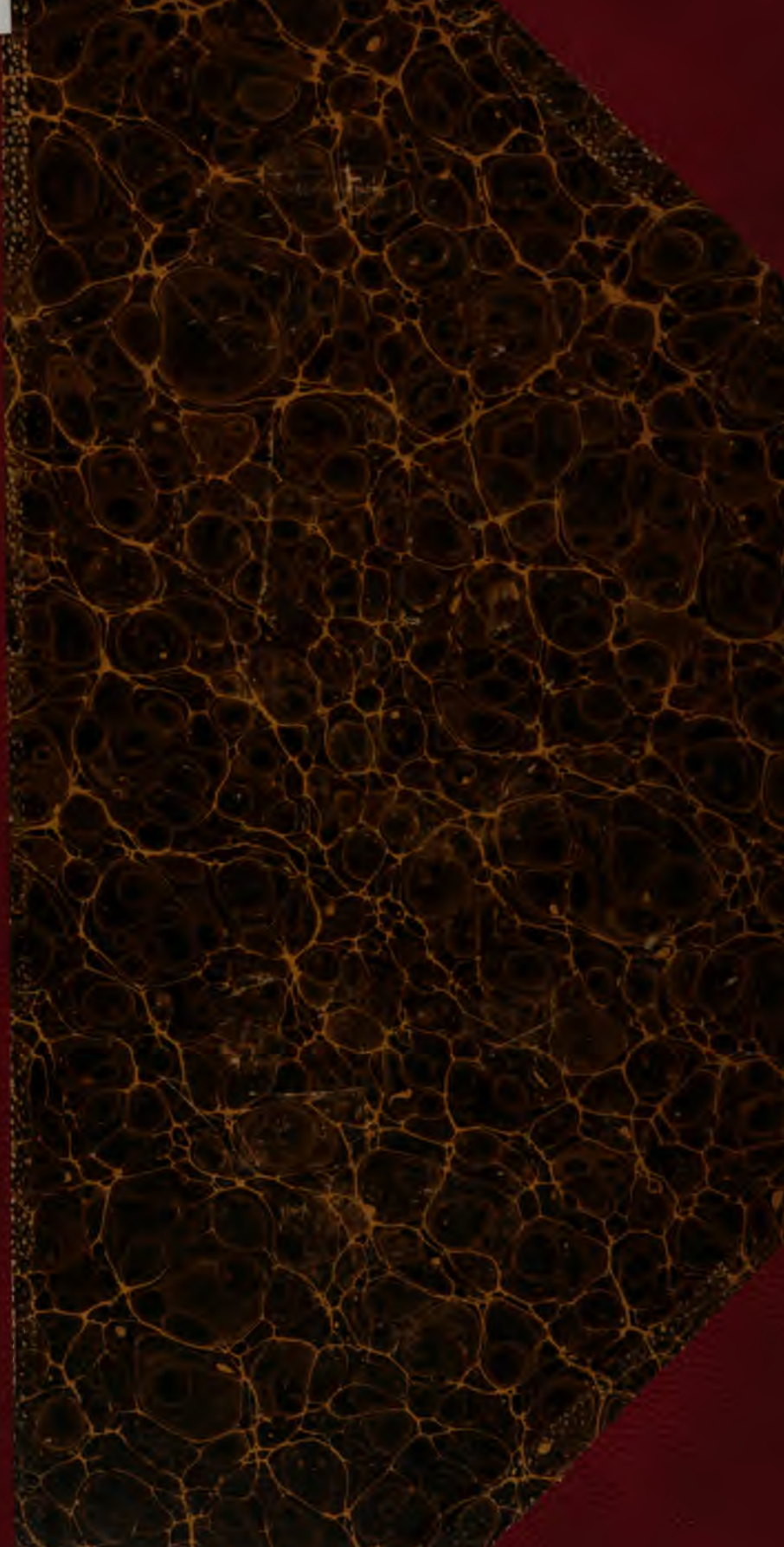
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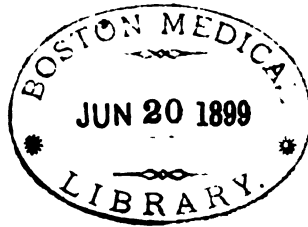
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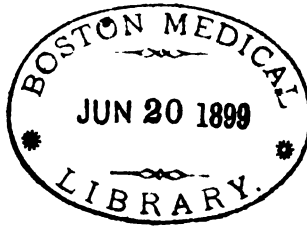


CONTRIBUTORS TO VOLUME XIII.

ALDRICH, CHARLES J., M. D.
ATKINSON, WM. B., M. D.
BAKER, A. R., M. D.
BAKER, LIGH K., M. D.
BEEBE, ROBERT C., M. D.
BELT, J. H., M. D.
BELTMAN, HENRY WALD, M. D.
BOLES, R. S., M. D.
BRASHEAR, B. B., A. M., M. D.
BROWN, B. E., M. D.
BUNTS, FRANK E., M. D.
BUSHEY, MAY L., Prof. Nurse.
CARLISLE, IRWIN E., M. D.
CLARK, WM., M. D.
CORLETT, WM. THOS., M. D., L. R. C. P., London.
CULBERTSON, J. C., M. D.
DRENNEN, C. TRAVIS, M. D.
DUTTON, CHARLES F., M. D.
ERWIN, J. J., M. D.
EYMAN, H. C., M. D.
FRIEDRICH, MARTIN, M. D.
GENTSCH, CHARLES, M. D.
HADDEN, ALEX., Attorney-at-Law.
HAMILTON, CHARLES S., M. D.
HARE, H. A., M. D.
HARRIS, C. JENNER, M. D.
HART, A. G., M. D.
HAUSEN, D. S., M. D.
KELLEY, S. W., M. D.
KINSMAN, D. N., A. M., M. D.
KNOWLTON, W. A., M. D.
LINCOLN, WALTER R., A. B., M. D.
LONGBRIDGE, WM., M. D.

LOWMAN, JOHN H., M. D.
MCCURDY, STEWART L., A. M., M. D.
MCGEE, J. B., M. D.
MCMICHAEL, J. C., M. D.
MARTIN, THOS. CHAS., M. D.
MOREHOUSE, G. W., M. D.
PARKE, DAVIS & Co.
PARKER, CHAS. B., M. D., M. R. C. S. E.
PHILLIPS, W. S., M. D.
OHLMACHER, A. P., M. D.
OXER, ROSA LEE, M. D.
RICHARDSON, A. B., M. D.
ROBB, HUNTER, M. D.
ROBB, MRS. HUNTER
SATTLER, ROBERT, M. D.
SCOTT, N. STONE, A. M., M. D.
SHIRHEY, U. S. L., M. D.
SKEEL, ROLAND S., M. D.
SMITH, C. W., M. D.
SMITH, F. K., M. D.
SMITH, G. S., M. D.
SPENZER, JOHN G., M. D., PH. D.
STEPP, MORRIS D., M. D.
STEVENS, J. L., M. D.
STEWART, J. S., M. D.
TUCKERMAN, L. B., M. D.
UPSON, HENRY S., M. D.

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Original Articles.

THERAPY OF THE MYDRIATIC DRUGS.*

BY J. B. McGEE, M. D.,

Professor of Therapeutics in the Cleveland College of Physicians
and Surgeons.

Belladonna, stramonium and hyoscyamus form a natural group closely resembling each other therapeutically, and each yields one or more alkaloids possessing decided mydriatic power. Although hyoscyamus is recognized as the weakest of the trio in general effect, as a somnifacient it excels. The scarlet eruption which so frequently follows the use of belladonna is seldom seen when stramonium is employed, and very rarely appears during the administration of hyoscyamus. Belladonna is the representative member of the group, atropin its representative alkaloid, and it is one of those drugs whose therapeutic uses follow very closely the line of its physiological action. Its effect on the vasomotor center is prompt and decided, while its action in arresting secretion and relaxing spasm yields most satisfactory results.

As its power of producing mydriasis is peripheral and not central in character, so also is its action in relaxing spasm, and we can thus understand its greater value when the spasm is dependent on a peripheral irritation

*Read before the Cuyahoga County Medical Society.

than when due to a centric cause. Its relaxing and quieting effect is exerted on the nerves involved, either indirectly, through the medium of the circulation, or directly, as by inhalation in spasmodic asthma, or injection into the contracted muscle in spasmodic torticollis. As a rule the involuntary muscles respond far more readily to its action than the voluntary, and when these are affected it is one of our most efficient antispasmodics. Atropin, unlike hyoscin, which is said to be isomeric with it, has no hypnotic power, and when sleep follows its use it is due to its action in relaxing spasm, or to a lesser degree in relieving pain which may be a factor in producing the insomnia.

Among the most evident of the effects of atropin are those which it exerts on the vascular system, and it is certainly a most valuable remedy when the blood-vessels are involved. Its use will frequently abort an incipient tonsilitis or favorably influence a superficial cutaneous inflammation, and while not very generally employed for the purpose its controlling power is very decided in hemorrhage, especially when passive in character. Severe epistaxis will frequently yield to small doses, and this is also true of some varieties of uterine hemorrhage, especially metrorrhagia. Hemoptysis requires relatively large doses—one-sixtieth of a grain or more—and while the physiological effect of the drug usually follows, the hemorrhage is generally promptly controlled.

In shock or collapse its beneficial influence on the vascular system is quickly shown—not in surgical shock alone, but in the collapse which we frequently meet in acute diseases, as pneumonia, typhoid fever, or peritonitis. Cardiac weakness and other causes may sometimes coexist in this condition, but the essential and predominant factor in its production is probably vasomotor paralysis; the cold surface, sudden fall of temperature, and relaxed vascular system all indicate this, and these symptoms are rapidly relieved by atropin, which is doubtless the promptest and most positive vasomotor stimulant we possess. While not so persistent as strychnin in stimu-

lating all the centers in the medulla, it is more active, its effect being almost immediate in arousing the reserve energy of the vasomotor center, and these two alkaloids are probably our best agents in the treatment of this condition. Hare states that when death occurs in chloroform anesthesia it is generally a vasomotor death, and he recommends an hypodermatic of atropin before administration of the anesthetic, in order to avoid this element of danger, as the depressing effect of chloroform on the vasomotor center is probably fully as important a factor in death in such cases as the paralysis of the cardiac muscle.

The well-known action of atropin in arresting secretion generally has been applied to the treatment of exophthalmic goiter, assuming this disease to be due to an hyperactivity of the thyroid gland; and the clinical results obtained indicate more than ordinary worth. Its undoubted value in opium poisoning is due rather to its general than to its specific action, as its antidotal power lies in substituting for the coma or passive cerebral congestion of the narcotic an active or arterial congestion, as well as stimulating the various centers in the medulla which are depressed by the lethal dose of the opiate.

Homatropin is an alkaloid derived from atropin and resembles it in action, but its effect, while somewhat similar in kind, differs in degree, and it is rarely used internally. A physiological difference exists in the fact that although atropin increases the frequency of the pulse beats, homatropin lessens it. It is useful in determining refractive errors, and while its effect on the pupil and ciliary muscle is as decided as that of atropin, it is less lasting. Its prompt mydriatic action, as well as slighter degree of toxicity, renders it preferable to atropin for that purpose, but in general ophthalmic therapy and for inflammatory conditions, atropin is probably preferred by oculists generally.

Daturin, the active principle of stramonium, practically represents its medicinal value. While rarely employed, its uses and doses are similar to those of atropin, with which it is said to be identical. Hyoscyamus yields

two alkaloids, hyoscin and hyoscyamin, closely allied to each other chemically, but possessing distinctive therapeutic differences. Although atropin is the representative mydriatic, hyoscin is an hypnotic unrivalled in its special sphere of action, and possessing an extensive therapeutic range. Hyoscyamin, weaker in mydriatic power than atropin, has great value as an antispasmodic and in quieting vesical irritation and tenesmus. It appears also to possess mild anodyne power, and is a valuable substitute for opium in children. It resembles hyoscin in general character and range of action, but is far feebler, and larger doses are required. In fact, it has been claimed that hyoscyamin is really impure hyoscin, rather than a separate alkaloid, and the latter has nearly supplanted it because of its smaller dose and greater hypnotic power. The official salts of hyoscyamin are the sulphate and hydrobromate, while hyoscin is represented by the hydrobromate alone. The difference in the dose is considerable. That of the salts of hyoscyamin is from $\frac{1}{4}$ to $\frac{1}{2}$ grain, though Peterson places its limits from $\frac{1}{8}$ to 1 grain. That of the hyoscin salt is officially stated to be from $\frac{1}{16}$ to $\frac{1}{8}$ grain, while even one-tenth of a grain has been given safely. In medicinal doses it is an efficient somnifacient and sedative; in large doses, a cardiac and respiratory depressant.

As hyoscin has practically displaced hyoscyamin as an hypnotic because of its greater power and promptness, so it is infinitely preferable to morphin and other narcotics in acute mania and melancholia. The disagreeable effects so frequently following the use of opiates are almost uniformly absent after hyoscin. Another advantage it possesses lies in the fact that it can be given when renal disease exists, and opium or its derivatives would be perhaps dangerous. It is said to be of little power in epilepsy, and in general paresis and dementia to possess no advantage over chloral. It excels in controlling cases characterized by decided delirium, and especially when associated with excessive activity or muscular agitation. In severe cases of chorea, when exhaustion threatens the

patient from excessive and continuous movements, the most efficient remedy we possess is probably hyoscin in large doses, and in paralysis-agitans its beneficial effects are equally evident. Some authorities assert that to produce sleep it should never be given by the mouth, but hypodermatically, while others affirm that equally good results follow its use orally.

Scopolamin, which has been recently recommended as a mydriatic in the form of the hydrobromate, is said to be really hyoscin, and to be practically identical with that alkaloid in all respects. Duboisin is an alkaloid similar in character to those already noted, and like them derived from a member of the solanaceæ. It is not very extensively employed internally, but in some forms of mental maladies possesses remarkable power. Wood thinks it is not a separate alkaloid, but that both this and daturin are a mixture of atropin, hyoscin and hyoscyamin; while Ledenburg believes it to be identical with hyoscyamin. Though these alkaloids appear to be isomeric they are evidently not identical in therapeutic effect, for, though somewhat similar, each possesses properties peculiar to itself, the difference perhaps being due to the manner of molecular grouping. As regards duboisin, while it has the mydriatic power common to all, it resembles atropin in arresting secretion, hyoscyamin in its antispasmodic action, and hyoscin in hypnotic power. Bartholow places special stress on its extreme value in puerperal mania, asserting that he has seen duboisin control such cases when all other means had failed. It is best adapted to disorders characterized by mental depression, as puerperal mania, and melancholia during the menopause, while hyoscin yields better results as a rule when acute maniacal delirium exists. Both duboisin and hyoscin are best given hypodermatically, the dose of the former being from $\frac{1}{100}$ to $\frac{1}{4}$ grain.

MEDICAL SUPERVISION OF SCHOOLS.*

BY LEIGH K. BAKER, M. D., CLEVELAND.

History will stand good for the statement that those nations which have exercised a powerful and elevating influence have been and are those which have had a care for the health of their citizens. Within fifty years undoubted evidence has induced nation after nation to recognize the value of sanitary science as the preserver of national health and wealth, and the fortifier of military resources. Self-preservation demands an educated citizenship. It is the underlying principle of public education. It creates the right of the state to say to the prospective citizen, "You shall, for an adequate length of time, be placed under such instruction as will make of you an honest, intelligent and useful citizen." Anything short of this will not insure the stability of the state. A condition of useful citizenship, however, is a fair degree of physical health. Moreover, there are certain unsundered rights of the citizen. Among these are his right to as fair a degree of health as his ancestors, and his right and moral duty to transmit to his offspring as good or better health than he himself enjoys.

Hence it is both the interest and duty of the state to insist, when it places the individual under formative educational processes, that the physical basis in the educational structure be adequately and properly laid. The state does not assume to dictate methods to the educator, but simply holds him responsible for the result. Both opinion and fact testify that the desired improvement in health, from grade to grade, has not been attained. Now, however, public sentiment has become so favorable to sanitary improvements that school authorities can spend a fair allowance of public money, without fear of censure, for the improvement of school hygiene. Not only so, but the state and the individual hold the school authorities responsible in the matter. Hence the time is ripe for the inauguration of departments of school hygiene in all city schools.

*Read before the Ohio State Pediatric Society, May, 1897.

In some form it has been inaugurated in Boston, New York, Philadelphia, Buffalo, Denver, St. Louis and other cities. Several state and city reports devote considerable space to the consideration of the topic, and in both Europe and America a number of carefully written articles have made their appearance. To articles and reports from the pens of Drs. E. M. Hartwell, A. G. Young, Wm. H. Ford, W. H. Burnham, and to many articles in the reports of the A. A. A. P. E., I am much indebted in the preparation of this article. Various phases of the question have frequently been presented for discussion at the local, state and international meetings of physical training, educational and medical societies. In some European states the matter has received more thorough and aggressive attention than has thus far been accorded it in America. Some phase of the subject is up for consideration at the meetings of the city medical societies several times a year. On such occasions it arouses a more animated discussion than is the case in debate upon other topics. This enthusiasm for school hygiene is simply one manifestation of the rapid growth of interest in sanitary science during the past decade—an indication of the fact that preventive medicine is taking a far more conspicuous position than the one which it held a few years ago.

The following outline of the general content of school hygiene will give a bird's-eye view of the subject:

School Diseases.—Of special senses—deafness, astigmatism, myopia. Skeletal—curvature and rotation of the spine. Nervous—chorea, headache, etc. Of respiratory tract—nose, internal ear, throat and lungs. General infectious diseases—eruptive fevers. Contagious diseases of the eyes and skin. Parasitic diseases.

Personal Hygiene.—Isolation of pupils. Disinfection of buildings, furniture and children. Inspection of convalescents. Personal hygiene of pupils regarding food, clothing, sleep, exercise, cleanliness and bathing.

Hygiene of Instruction.—Observation of the effects of the course of study on the health of teachers and pupils (25 items of interest).

Physical Training or Education.—Gymnastics. School plays and athletics.

School Grounds.—Site, area and arrangement.

Buildings.—Ornamentation, foundation, basement, height, finish, entrance, halls, corridors, wardrobes, staircases.

Rooms.—Dimensions, lighting, placing of furniture, colors, blackboards.

Seating and Desking.—Easily adjustable in four directions. Changed by teacher two or more times per year to fit pupil, if necessary.

Ventilation.—Temperature records. Air tests. Location and size of inlets and outlets. Systems of heating. Supervision of ventilation.

Sewerage and Cleaning.—Examination of plans for sewerage with suggestions of alterations where necessary. Inspection of cleaning of buildings with regulations for cleaning and disinfection.

Having presented the items which may properly be considered within the province of the school sanitarian, let us look at some of its phases more in detail. In so doing let us endeavor, by the examination of a sufficient number of examples, a review of the experience of several cities, to determine whether or not a more thorough supervision of school hygiene is needed and is worthy of the place it claims.

It will be taken for granted that this paper is not, in any sense, a discussion of the content of school hygiene; simply a few leading facts, sufficient for suggestion, will be noted.

DEFECTS OF HEARING.

Six observers give us an average of 20.33 % of cases of deafness. Schmeigelow found that of 79 dull pupils 65% were hard of hearing. Sexton found that only 3% of the 13% in whom he found partial deafness were aware of their difficulty. Of these, but one case had been detected by the teachers. As a result pupils could not understand questions, missed promotion and were dis-

couraged. Often they were placed too far from the teacher and could not understand her words. Hence they were frequently punished for inattention and dulness by teachers who, had they understood the real trouble, would have encouraged them and avoided needless severity. Many of these cases were said to be, indirectly, the result of poor ventilation.

Teachers should seat pupils according to some practical test, such as Galle's. Rooms should not be too large and but few should contain over 50 pupils. The necessity for distinct enunciation and how to secure it should be shown teachers where necessary. Buildings should not be located on noisy streets.

MYOPIA.

European examiners found that about one child in three was near-sighted. Since the taking of these statistics much improvement in lighting, seating and desking, and in the arrangement of courses of study has taken place. The statistics of 4,100 examinations made by Drs. J. D. Jones and D. B. Smith in 1882 in Cleveland give an approximate finding of 8%. Recently the test-type examination of ten eighth-grade rooms revealed 13%. In almost every case the pupil knew of the difficulty and was wearing glasses for its correction. It is probable that less than 20% of myopia exists in the grades below the high-schools. There are, however, many children in basements and store-rooms. In some of these the lighting is poor. In this, as in other matters, there are still many teachers who need a more acute observation regarding the physical condition of their pupils; for the early detection and treatment, not to speak of prevention, renders less the inconvenience and danger of such diseases.

No doubt prolonged eye strain, due to long hours of study, faulty lighting, reading out of the visual angle (as in the case of misfitting desks and chairs), and too small print (newspaper type), is at the bottom of these cases. Erismann found that of those who studied two hours per day extra, 17% were myopes; of those who

studied four hours per day extra, 29% were myopes, and of those who studied six hours per day extra, 40% were myopes.

Cohn cites the case of two schools in Coburg in which, after removal to properly equipped buildings, the percentage of myopia fell from 12 and 14 to 4 and 7 respectively. Similar experience has been noted elsewhere. Hence we may be assured that by following the precautions herewith given myopia in our schools can be reduced to an insignificant percentage:

1. The school room should have an abundance of light (1:5 of floor space) in every part. The principal source of light should be at the pupil's left, and should be from the proper angle.

2. The periods of eye work should not be too prolonged; they should alternate with frequent pauses, during which gymnastic or other recreative processes are allowed, thus resting the brain and eye.

3. The tendency toward more oral instruction and recitation and less written work should be encouraged.

4. School work to be done at home should be limited to a very small amount and in the lower classes to none.

5. Seats and desks should be used with which, while the child preserves correct posture, his work while lying on the desk is easily within the visual angle. The shoulders should be parallel with the desk while writing. Hence the use of vertical script is demanded.

6. The type of all printed matter should be large, distinct and suited to the grade using it.

7. Blackboards should be of a dead black, not glossy, and should be placed where they will be well lighted.

8. Children should be told to go to their family physician, and upon his recommendation to a regular eye specialist, thus insuring the use of *suitable* glasses.

9. Where medical inspection is impracticable the teachers should be taught to test the eye and ear. They should test all pupils and refer cases detected or suspected to proper medical authority.

What has been said in regard to myopia may be reiterated in the case of astigmatism and hypermetropia.

CURVATURES OF THE SPINE.

These result from the continuous use of malpositions. Some of them are,—the nurse's position, writing, book carrying, standing, rocking chair, bicycle and seat and desk positions. In 611 examinations, Guilleme found 30%. In examining girls, Kolpsch and Knorr report respectively 80% and 83%. A large percentage was discovered in the examination of ten grammar-grade rooms in Cleveland. To reduce this percentage several plans have been put into execution and others are being considered and matured.

1. The director has ordered that three sizes of seats and desks be placed in all rooms in which reseating and desking is necessary.

2. This year vertical script has been introduced. The principals state that in the lower grades, where the old writing position had not become a fixed habit, great improvement in the position of the children while writing is readily noted.

3. A thorough study of the principles and the most recent findings in hygienic seating and desking is being made preparatory to the adoption of hygienic school furniture. The practical difficulty in the way of immediate change of furniture is the expense item. The city now has enough invested in school furniture to build and equip several much needed school buildings, and so long as such a necessity exists public opinion would not countenance a change of school furniture involving great expense.

4. During the past year special attention has been called to sitting and standing posture in many ways. As a result we can note improvement of carriage in many rooms. The preventive influence of gymnastics will be referred to under Physical Education.

Physicians can assist us by cautioning mothers and nurses against carrying their children habitually in some

position which will curve their spines in some given direction, allowing children to remain frequently in bad positions while reading by some window, or assuming malpositions while on their wheels.

The great majority of spinal crooks occur before the children pass the fifth grade. Hence it is important that during the first few years of school life the habit of good carriage should become fixed. The teachers should be explicitly shown how to detect cases of curvature and in this, as in all school diseases, early refer them to proper medical authority. Teachers will receive instructions on the cardinal points of construction of seats and desks with directions for fitting them to pupils.

NEURASTHENIA.

Too much work for the brain, too little food for the muscle cell, too frequent and continuous diversion of the blood to the brain in an impure atmosphere, and we have chorea, headache, etc. This applies to teachers as well as to children. Several observers have found that during school life the percentage of nervous troubles increases from year to year. An increase, approximately, of from five to fifty per cent. from the lower to the higher grades was observed. The remedy is to be found in a better sanitation through a more equitable apportionment of mental and physical work. This implies ample time and thorough facilities for the physical exercises.

RESPIRATORY TRACT—NASAL AND THROAT TROUBLES.

Many cases of rhinitis, polypus, adenoids, tuberculosis, etc., exist, unsuspected, and place pupils at a positive disadvantage in their endeavors to compete with their fellows. It is especially with the teachers that the throat *itis*es abound. Many of them do not know how to use and care for their voices. Hence, on account of the necessity for the continued use of the voice, slight attacks tend to become severe and often chronic cases.

CONTAGIOUS DISEASES.

Inspection for one week in the primary schools of New

York city revealed 477 cases of contagious diseases of the eyes and the skin, and parasitic diseases. In '90 and '91 an epidemic of follicular conjunctivitis affected the eyes of 10,000 Dresden children, seriously interrupting school work and costing the city 27,000 marks. Cases suspected of such diseases should be referred at once to the profession. The presence of a percentage of tuberculosis calls for the stringent supervision of regulations calculated to prevent its spread.

Since the exanthemata are managed by the health office I will not refer to them except to say that it should have the hearty coöperation of the school authorities and of the teachers in the discovery and early isolation of cases. They should also refuse to reinstate pupils until convalescence and disinfection are thoroughly established. To this end teachers should receive special instructions regarding the earlier symptoms of these diseases. It may be said that the principals understand them and are very careful in the matter. In some cities special examiners are detailed to inspect for the eruptive fevers. The plan is on trial. It has its drawbacks and its advantages. Its operation will be watched with much interest.

PERSONAL HYGIENE.

Throughout the course in physiology and hygiene the teachers give instructions on such topics as food, clothing, sleep, cleanliness and bathing. There is no question but that the personal hygiene of the city children is much improved by school influences. Some teachers work wonders in their rooms. Others require the stimulation of constant supervision. Since they are being introduced from Europe into a few cities in this country, school baths deserve especial mention. If any doubt their advantage, a whiff of the air in certain rooms, within a few moments' ride, will convince the most skeptical. Their advantages, as observed in Europe, were bodily cleanliness of the child, more care on the part of parents in keeping clothing neat and clean, improvement of the condition of the school room air, gain

in the health of pupils, and an increase in mental freshness and activity. In addition, a good reflex moral influence was exerted upon the parents. The subject needs intelligent investigation and agitation.

HYGIENE OF INSTRUCTION.

Under this topic we can merely mention some of the items which should concern a department of hygiene, viz., physiology of brain work, school age, amount of study, home study, arrangement of work, recreative intermissions, discipline, number of pupils to a teacher, courses of study, methods of instruction, physiology and hygiene.

PHYSICAL TRAINING OR EDUCATION.

Since it seems to be less fully understood than most of the other topics, let us examine physical training a trifle more in detail. In this country it is still in its infancy. Some leading educators and many physicians who have the knack of humbling themselves and getting into the confidence of the children, have found out something about it. So rash, even, are some as to assert that games and gymnastic movements which cultivate the neuro-muscular qualities are of more educative value to children than are some of the other mental processes to which they have been subjected. In European countries gymnasias and furnished playgrounds are used in connection with the schools. In America we have attained little progress beyond free standing gymnastics in the school-rooms or hallways. From ten to twenty minutes per day is the time allowance. However, the grade teachers in some cities have made much progress in this form of physical training, so that now, under very limited opportunities, some obtain results which are indeed wonderful.

Objectively, school gymnastics are spoken of as educative, recreative and hygienic. In order that the process may be sufficiently attractive to be recreative and hygienic, the mind must be pleasantly employed. Hence the cultivation of the neuro-muscular qualities, grace, quickness, muscular control, physical judgment and physi-

cal courage. From the hygienic standpoint four main objectives are constantly in view,—good posture or carriage, the circulatory and respiratory systems and recreation. Many teachers do not recognize good carriage when they see it. When speaking to the children upon the topic many are not able to use terms which enable the little ones to *know how* to stand or sit. Hence the first necessity is the acquisition of a correct concept of carriage, and the second is the mastering of some simple gymnastic terms by the use of which the teacher can readily and frequently place in contraction the muscles which sustain the poise esthetically and hygienically recognized as correct carriage. The third is the acquisition of a pedagogical and at the same time hygienic method of combining these terms, denoting positions of the body, into combinations of physical exercises. The latter condition, a correct method, is the more difficult of attainment. It takes the majority of teachers two terms to master it. While doing so their work is necessarily somewhat mechanical.

By the method in use those muscles supporting the spine (which under the conditions of school life are used less than are other spinal muscles) are frequently placed in both tonic and clonic contraction. This is done not only during the exercise period but during short periods, at intervals, throughout the day. This is easily accomplished while the children are in their seats. Thus are nature's shoulder braces and corset developed and continually strengthened. This process, properly applied, plus the *habit* of correct carriage while standing or sitting, will eventually prevent, for the most part, curvatures of the spine. Some of the working positions at the desks give rise to passive congestion. By quickening and diverting the blood current this is measurably relieved. Some of the more vigorous exercises materially develop the heart and the muscular coats of the arteries, thus fortifying the circulatory system.

Breathing exercises are repeatedly given every day. Several times during each exercise period they are em-

phasized. At these times special attention is paid to ventilation, and the atmosphere of the room is certain of being thoroughly exchanged for pure air. At the same time teachers are instructed so to arrange the ventilation that pupils are not compelled to stand in draughts. In this way the quality of the blood and of the lung tissue is improved. The capacity of the lungs, which in city children is abnormally small, is rapidly increased. The muscles of respiration are trained and strengthened while the mobility of the chest walls is increased.

Gymnastics supply pleasant entertainment for the numerous recreative pauses which a hygienic course of study should provide. It relieves the tiresome tonic contraction of certain muscles used in desk work, while it refreshingly stretches their antagonists. Upon the acquisition of terms and a good method of combination, the spirit of the game enters more and more into the gymnastic procedures. Bright eyes and smiling faces succeed the scowl of mathematical concentration when they hear the command "Attention! gymnastics!" Should one of you visit a room in which the gymnastics are not a pleasure to the children, conclude at once that the teacher has not mastered the art of giving educational gymnastics.

We hope that ultimately all of our ward and high-school buildings will be planned so as to contain baths and gymnasias, and that numerous well equipped and well managed playgrounds will form oases of health and pleasure for the thousands of children who wander about in our city desert of wood, stone, iron and steel, scarcely knowing how to play.

GENERAL CONCLUSIONS.

Thus we have glanced at a few of the subjects belonging to the content of school hygiene. Your mind has taken an excursion into this realm of educational thought and work. Having taken a general view of the landscape and noted some of its salient features, it is now prepared to draw a few conclusions.

It is evident that the territory between the practi-

tioner, whose observations are largely of pathological conditions, and the educationist, whose observation is largely limited to mental phenomena, is a broad realm; the realm in which, for the most part, preventive medicine must operate. While it will be noted that it contains much which lies in the field of actual practice and practical education, it is at the same time evident that there are a vast amount of opinion and large collections of facts, which, for their advantageous assimilation by any city school system, require the constant study of men especially trained for this phase of school supervision. On the other hand, that there may be actual accomplishment, rather than mere study of problems, the director of a department of school hygiene should possess the training and sympathy of his fellow physicians, the skill of the teacher and the organizing ability of the educator.

To recapitulate, the state is responsible to the citizen for the preservation of his health while the citizen is under the tutelage of the state. It is also dependent on the continuance of the health of the citizen for its own preservation. The school authorities are in turn responsible to the state for such an educational regimen as will ultimately return to the citizenship of the state an honest, intelligent and useful citizen. The popularity of sanitary science has made it easy for educational authorities to inaugurate such a regimen. The growth of both general and special knowledge has been such that a new field, school hygiene, requiring specially trained medical supervisors, has been created. As a phase of supervision the department of hygiene should be sustained by and advisory to the educational authorities. To them alone it is responsible, and they in turn are responsible to the state or community. In order that this department may enable them to meet, efficiently, their obligations, they should endow it with adequate support and with as much authority as is possessed by other phases of supervision.

In brief, the duties of a department of school hygiene are,—a careful study of the general and special

field; collection of its literature; tabulation of the results of researches by accredited observers; testing of generalizations derived from these results in the special field; constant practical study of the conditions in the immediate field of operations. From the knowledge thus derived, of the most recent findings of value and the actual conditions existing, follows a readiness in suggesting a wise application of each advance in school sanitation to the conditions extant in the schools.

Since the details of the work are entrusted to the grade teachers no scheme for the improvement of school hygiene will succeed except with the coöperation and improvement of the teachers. They, like the rest of us, are good, poor and indifferent. The good teachers continually ask for assistance. The poor and the indifferent need the constant stimulation of inspection, supervision and encouragement. Back of all this the teaching profession itself needs the encouragement of better preparation, higher ideals, larger payment for services, and more satisfactory social standing, so that more talent of a high order can be brought and kept within its ranks.

After thorough organization, a department of hygiene may go further and solicit private aid for some expensive phases of its work, which, while appealing to the more intelligent and philanthropic men of means, would not be sustained by public sentiment.

Thus, in brief outline, you have a scheme of the content of school hygiene, reference to some of the topics which it contains, and a few conclusions deducible from their consideration. Much has been accomplished. Much needs to be done. Much is being done, and much more is in sight which will receive attention as soon as the necessary funds are forthcoming. Pray, therefore, and agitate for more school funds, that our resources may be in proportion to our opportunities.

ANIMAL TUBERCULOSIS—ITS RELATION TO
HUMAN TUBERCULOSIS—SUGGESTIONS
FOR ITS MANAGEMENT.*

BY D. N. KINSMAN, A. M., M. D.,

Professor of Diseases of the Nervous System in Starling Medical
College, Columbus, O.

Thirty-two years ago Villemin demonstrated the infectiousness of tuberculosis by inoculating rabbits with tuberculous sputa. Fourteen years ago I read a paper before this society, giving clinical evidences of the communicability of tuberculosis from person to person where they dwelt together. I cited cases where whole families had become extinct in a few years from consumption.

Then I stood almost alone in this society as the advocate of this doctrine. We had then just learned of the bacillus tuberculosis, discovered a few months before by Koch. To-day we realize that few discoveries in medicine have been followed by such rich results. The profession has accepted the doctrine of Villemin. We have learned that tuberculosis in men and animals depends upon one and the same cause, and that it is reciprocally communicable. Our food animals,—cattle, hogs, game and fowls; our pets,—dogs, cats and birds, as well as the horse, are all subject to tuberculosis. The sheep is less liable to it than any of them. In Massachusetts, where inspections are made, no tuberculous sheep have been found.

In the tables of human mortality nearly or quite one-sixth is credited to tuberculosis. This is nearly double that which is caused by diphtheria, scarlet fever, smallpox, typhoid fever and measles combined, which are under our statutes reported infectious diseases.

The battles of the future, as in the past, will be with microbic diseases, but on different terms. We know their fatal secret, and we know how to meet them. Vaccination and serum therapy have shown us how we may both prevent and cure such diseases, before which the profession stood powerless formerly.

* Read before the Ohio State Medical Society, May, 1897.

The battle with tuberculosis is on, and to the struggle we come urged by our past and present experience, and our hopes for the future. Bovine tuberculosis prevails over all Europe, North America, Australia and the islands of the sea. It is a disease of all countries, and increases in virulence as the temperature of the region increases. In 1879, 1880, 1881, at the abattoirs of Augsburg the proportion of tuberculous animals was 2.38 per cent. This distributed among animals according to age showed, of those less than one year of age, .02 per cent.; from one to three years, 7.1 per cent.; from three to six years, 35.5 per cent.; over six years, 59.2 per cent. There were four times as many cows as other beeves infected. During 1890 and 1891, 12,000 cattle were slaughtered in England for contagious pleuro-pneumonia. Of these, 1,464, or 12.2 per cent., were found to be tuberculous (Report Mass. Cattle Commissioner, 1894). In some special herds the number infected with tuberculosis rose to 75 per cent.

Statistics from abattoirs in Germany show that among 51,427 slaughtered animals, 6 per cent. under six weeks of age were infected; 6 per cent. from six weeks to one year; 11.4 from one year to three years of age; 33.11 from three to six years of age; 43.4 over six years of age.

Abattoir statistics from Berlin: Before 1892 there were 12 per cent. infected; in 1892-93, 15 per cent. infected; in Saxony, in 1893, 18 per cent. were infected.

In Leipsic, from 1888 to 1894, the number of cows infected rose from 17.5 to 31.1 per cent.

In Schwerin, the number of infected cows rose from 12.83 per cent. in 1886 to 37.60 in 1894; and the number of infected bulls, oxen and calves increased in an equal ratio

The following statistics are from widely separated places: Prussia, among slaughtered animals, 9.5 per cent. infected; Berlin, 12 per cent. infected; Dresden, 14.4 per cent. infected; Bromberg, 26.2 per cent. infected; Upper Silesia, 9.5 per cent. infected; Midlothian, 20 per cent. infected; Yorkshire, England, 18.7 per cent. infected; London, 25 per cent. infected.

The records of the abattoirs of Copenhagen for four years, 1890-93, show that of 132,294 beef cattle, 23,305, or 17.70 per cent., were tuberculous; of 8,292 hogs, 1,272 were tuberculous, 15.30 per cent.; of 185,765 calves, 369 showed tubercles, 0.2 per cent.; of 337,014 sheep, one was tuberculous, 0.0003 per cent.

The records of the Berlin slaughter houses in 1892-93: Of 142,874 beef cattle, 21,603 were tuberculous, 15.1 per cent.; of 518,073 hogs, 7,055 were tuberculous, 1.55 per cent.; 108,348 calves showed 125 tuberculous, 0.11 per cent.; of 355,949 sheep, 15 were tuberculous, 0.004 per cent. (Royal Com. Report on Tuberculosis).

Of animals undergoing government inspection, at various abattoirs, at Chicago, Kansas City, St. Louis, a very small fraction of one per cent. were found tuberculous. The efficiency of this inspection will be appreciated when you learn that for ten hours each working day in the year, every inspector in the government employment would have to inspect two animals per minute.

"Of 14,050 animals tested by the department of agriculture, 11,582 were healthy and 2,468 diseased (17 per cent.). In Germany, according to Siedamgrotzky, in the state of Saxony (excluding calves), in 1888, 5 per cent.; in 1889, 9 per cent.; in 1890, 16 per cent. were infected. This would seem to show that tuberculosis is increasing, and though I do not doubt that this is so, these marked deviations in the number of animals found to be tuberculous are probably explainable more from the fact that the government meat inspection was gradually being more rigidly enforced than that the disease itself was increasing at this apparently alarming rate. Even in the thickly peopled German Empire, tuberculosis is seemingly more prevalent in certain districts than in others. In the district of Argenmuende, for instance, among 13,000 cattle slaughtered, none were found to be tuberculous, and in the district of Teltow, among 40,000 head killed, only 15 cases appeared.

"Dr. Ostertag's observations at the Berlin abattoirs show, on the other hand, that 25 per cent. of the adult

cattle slaughtered there for human food are tuberculous in a greater or less degree. Age plays an important part as to tuberculous prevalency. Yearlings and under are rarely affected, but with every year of advancing age the chances of escape become less. Old milch cows (ten to fifteen years) are rarely immune. On an average, Oster-tag found 75 per cent. of these old dairy veterans carrying scars of their battle with grim phthisis" (Prof. D. S. White, address before the Ohio State Agricultural Convention, 1897).

Of 26,958 animals tested by tuberculin in Massachusetts, 4,389 were found to be tuberculous. The proportion of tuberculous animals found at the slaughter-houses was 1 per cent. The reasons for this will be obvious upon reflection. Most of the animals shipped to the stock-yards in this country are young. They have had the range of pastures, and have never been stable-fed, because the climate where they have fed is such that they are kept in the open air. Confinement in stables is dangerous; it is there that infection spreads the most surely and rapidly.

In the state of Massachusetts, where there is a systematic effort being made to stamp out tuberculosis among cattle, the condition of affairs is alarming on the farms. Of twenty-two herds, aggregating 779 animals, 317, or 40.6 per cent., were found infected. One fine herd of five, which supplied milk for children alone, furnished five infected animals. In another instance, a herd of selected animals kept in the best possible environment, 64 animals showed 60 infectious, and these animals furnished milk for food (Rept. Mass. Cattle Com., 1896).

Tuberculosis is very common in herds of cows gathered near large cities to furnish milk to the inhabitants thereof. At San José, Cal., of 892 cows tested with tuberculin, 225 gave reactions, 25 per cent. At New York city, 2,147 tested gave 405 reactions, 19 per cent. At Richmond, Va., out of a herd of 134, 95 reacted, 66 per cent. In Pennsylvania, of 2,975 cows tested, 795 reacted, 20 per cent. At Watertown, N. Y., 15 dairies of 281

cows showed milk contaminated with tubercle bacilli, and two dairies in which no cows reacted produced contaminated milk. It is said that 3.5 per cent. of the cows in New York are tuberculous. We have one herd of 27 near Columbus, of which 11 reacted, 40 per cent. Another herd gave 24 reactions out of 31 animals. Another entire herd reacted.

Of 6,300 cattle tested for tuberculosis in 1896, in Connecticut, 897 reacted to tuberculin and were destroyed, 14 per cent. Of one herd in northern Pennsylvania, out of 171, 150 were tuberculous, 90 per cent. Seven and one-half years ago this herd was sound. Six short-horns which were coughing were purchased then, with the above-mentioned result. The average age of these cattle is four and one-half years (Jour. Comp. Med., April, '97).

As to the prevalence of tuberculosis among swine, we have but little information from abattoir statistics or other sources. The tuberculized hog emaciates and dies speedily, while a tuberculized cow even fattens with extensive lesions, and may die in good condition. Fowls are not readily infected with the bacillus of human tuberculosis, but they suffer from a special form which spreads among them. Recent investigations, however, seem to show the two forms depend upon the same organisms, modified by the ground upon which they grow. Parrots are infected with lupus when long exposed to human tuberculosis, and there is a case reported in which avian tuberculosis was communicated to a human being by a blow from the bill of a sparrow thus diseased. Horses have been infected by feeding upon the milk of tuberculous cows. Dogs, cats, rabbits, and cobayas are quite commonly affected.

The bacillus-bearing discharges from the lungs of men and animals, when dried and pulverized, may enter our lungs and cause infection. The dejections from the bowels of cattle, dried and pulverized, as they are around stables and on fields, are another source of inhalation infection, and this mode of infection is probably not uncommon. Ever since Villemin's discovery, feeding experi-

ments have been going on which conclusively show that the flesh and milk of tuberculous animals may be the source of infection.

Toussaint succeeded, by the injection of some drops of blood drawn from a tuberculized sow, at the first trial, in infecting a young pig with generalized tuberculosis. He also, by injection of the juice and blood expressed from the muscle of a tuberculous heifer, under the skin of a pig (2 c.c.), caused general tuberculosis of the animal. The same authority caused infection, both in pigs and rabbits, by injecting the expressed juice of the lung of a tuberculous cow ($1\frac{1}{2}$ c.c.) after it had been heated for ten minutes to 58° C. The infection was general.

To determine the maximum resistance of the tuberculous virus to heat, he submitted the muscle and defibrinated blood of a very fat beef to 61° , 63° and 65° C., temperatures equal to 141° , 147.4° , and 149° F. Four cobayas received the juice at 61° C., four at 63° , and two at 65° C. All died of general tuberculosis. Rabbits were injected with the juice of muscles exposed to a heat of 70° C. (158° F.) for two minutes. They became tuberculous and died (Bouley, Contagion Vivante).

The Royal Commission of Great Britain, in 1890, fed pigs, guinea pigs and rabbits their usual food, to which were added the flesh and milk of tuberculous animals, always uncooked, and obvious tubercular material was avoided. Thirty-six per cent. of the pigs, 16 per cent. of the guinea pigs, and 15 per cent. of the rabbits were infected.

Woodhead conducted a similar set of experiments. Result, 100 per cent. of pigs, 100 per cent. of cats, and 75 per cent. of the guinea pigs became infected. Can we longer doubt from this array of terrific facts that our food animals have a very intimate causal relation to consumption among men?

Leclainche removed the muscle from the calf of the leg of bodies of men who died of generalized tuberculosis, in such a manner that they could not be contaminated with tubercular deposits elsewhere in the bodies. Thirty-

seven experiments with the expressed juice injected into the peritoneal cavity of the cobayas, while they were at the same time fed with pulp, gave 5 successes. Sternheil performed a similar experiment with the juice of the psoas muscle in ten animals, and Liénaux and Gratia in two (cobayas) with 12 successes. The success of both series of experiments was 39 per cent. It is asserted by some authorities that tuberculosis of man is not as virulent as that of animals.

Gerlach, Bollinger and others long ago proved that milk from tuberculous cows would cause the disease in animals to whom it was fed.

Peuch fed a pig 270 quarts of milk from a tubercu-
lized cow in 43 days, producing general tuberculosis. A rabbit drank 14 quarts in 80 days—result, general tuberculosis. Klebs says the cattle herders of the Berne over-
lands among the Alps are scourged with miliary tubercu-
losis. They are a hardy race who spend the entire sum-
mer in the Alps, and their entire food is bread and milk. They are infected by milk. The bacilli enter the blood from the intestines, causing miliary tuberculosis. Ani-
mals are infected in the same manner as men, by inhala-
tion and ingestion of the bacilli as well as inoculation. Three successive generations of cows fed at the same stall have perished from tuberculosis. The diagnosis of bo-
vine tuberculosis by physical examination is by no means easy. The cattle may have extensive lung lesions with-
out emaciating, and even grow fat. Injections of tubercu-
lin will in 90 per cent. of cases produce a febrile reaction of from 2 to 4 degrees in from 10 to 15 hours in infected cows. This febrile reaction bears no relation to the ex-
tent of the lesions, being absent in some cases in animals far advanced in the disease, but after all it is the best means at our command.

I learned from the Cattle Commission of Massachu-
setts, that in their experience it scarcely ever failed where properly used. Instances of systematic fraud, by substi-
tution of colored water and other substances to evade the law, are reported. The preparation of tuberculin and its

mode of use may be omitted. As it contains no living germs it cannot communicate tuberculosis, and the testimony collected on this subject shows that its effects are temporary.

Schroeder injected 32 guinea pigs with the milk of cows which reacted to tuberculin. The milk, $1\frac{1}{2}$ ounces, was treated with the centrifuge, and 5 c.c. of the sediment was injected into the peritoneal cavity. Bacteria and leukocytes were found in the sediment in all cases. No mention is made of bacilli. One case only was followed by tuberculosis (U. S. Department of Agriculture, Bulletin No. 7). Such experiments have been made by others. As a rule they have not been successful, and yet Ernst and Hershfield have shown the milk of tuberculous cows is sometimes infectious even when the udder is not obviously affected.

But these negative experiments cannot be held to invalidate those in which milk of such origin has been followed by infection when fed. We must also remember that the feeding experiment goes on for months and years, and that the chances for infection are thus many times multiplied. The same may be said concerning the use of the flesh of tuberculous animals. While it is a fact that chance infection by soiling with tubercular deposits may explain the infectiousness of meat in many instances, the experiments above cited from Leclainche shows that the tubercles do develop in the muscular structures, although the glands and viscera are even in these cases the common source of infection.

How shall we meet this condition of affairs? Manifestly, we must treat all our food products with sufficient heat to destroy any tubercular germs. This may be accomplished, as far as the milk is concerned, by pasteurization. As for meats, they must be thoroughly cooked. All parts thereof must be exposed to at least 200° Fahrenheit for a definite time. This direction applies alike to salted and smoked meats, for curing does not destroy the bacilli.

Investigations have shown that herd-raising peoples

are the special victims of tuberculosis. The Tartar masters of the Chinese, who raise herds and feed upon their products, are scourged with consumption, while the poor, dirty, starved native who uses none of these as food escapes. The tribes of central Asia who feed upon sheep, goat's and mare's milk escape—a striking contrast to the fate of the herders of the Alpine uplands cited above.

During a recent visit to the city of Boston, I called at the office of the Cattle Commission to learn their methods. Appropriations have been made as follows for the work of the commission: 1894, \$35,000; 1895, \$100,000; 1896, \$300,000. Massachusetts never does anything by halves, and being convinced that there is a stern conflict to be waged with this foe of human life and of her animal industry, she has furnished the sinews of war with a lavish hand.

First, a quarantine has been established against the entrance of all cattle upon her territory, except when destined for immediate slaughter, unless they have been inoculated with tuberculin within a limited time before a permit is granted for bringing the animal into the state. All animals must be covered by such a permit, even when the owner brings the animal from his own farm in the adjoining states to his farm in Massachusetts. All animals slaughtered for market are inspected and passed if free from disease, otherwise condemned and rendered unfit for food. Tuberculin is used in all cases as the means of diagnosis, and the test is repeated if unsatisfactory.

When a diseased animal is killed a nominal sum is paid therefor, upon appraisement, not exceeding sixty dollars. The state has been divided into districts, and a systematic test of all animals in the state is now being made. The stables in which the infected cattle have been kept are thoroughly renovated, and mercuric chlorid and carbolic acid in solution are used to saturate the mangers, floors, stalls, etc., and the woodwork is washed. By keeping all infected cattle out of the state, killing all infected cattle in the state, and by rigorous hy-

gienic measures, the Cattle Commission expects to banish bovine tuberculosis from the state. Such drastic measures have not been supported without protest, and as a result more conservative men have found a place on the commission and milder measures have been adopted.

A hint of how we may proceed without destroying or impairing an industry may be derived from the methods in use in Denmark. This country is about one-third of the size of Ohio, and has a population of 2,200,000 people and 1,700,000 cattle. The exports from the products amount to \$10 per capita. Tuberculosis has been found in over 38 per cent. of the animals tested. Destruction of their herds meant destruction to the people. Bang, who has been in charge of the work of suppression of tuberculosis among cattle, proceeded in the following manner:

All suspected herds are tested with tuberculin, and those animals which are tuberculous are separated from those which are not. The animals which are far advanced in the disease are killed. The animals which have been exposed are retested from time to time with tuberculin. When these animals react they are, when possible, fattened. The carcasses of all such animals are inspected, and if the disease is localized, the diseased parts are removed with care so that the flesh is not soiled with the tubercular products, and the rest is sold for food. This course is recommended by Nocard and Bang, believing that by exposure of the flesh and milk to a temperature of 185° F. the risk of infection from meat and milk may be minimized.

In Denmark, the milk of tuberculized cows is heated to 185° F. and then used in making butter. The skimmed milk, which is fed to animals, is thus heated also. It must be borne in mind that the isolation of sound and sick cattle is complete and permanent, and they are never allowed together in the same stable or pasture. The young cattle are separated from sick mothers and fed on the milk of sound cows.

CONCLUSIONS.

I. Tuberculosis in men and animals is due to one and the same cause, and is reciprocally communicable by inhalation, ingestion and inoculation.

II. It can be limited by the same measures which have been found effectual in other microbic diseases.

III. The disease is much more infectious among animals than in men. This is especially true of cattle.

IV. Statistics in Europe and America show that tuberculosis is rapidly increasing among our herds of horned cattle.

V. Danger of infection of the human family by these infected herds will thus be increased.

Statistics of Massachusetts are said to show that the mortality in that state from consumption in 1848 was 42.7 per 10,000 population; in 1893 it was 22.7, a diminution of nearly 50 per cent. This is due to better sanitation, but this rate of mortality, which is about the same as it is in Ohio from consumption, proves that this is the most fatal disease which affects humanity.

No epidemic has ever been so fatal as consumption in modern times. The mortality from all the contagious diseases reportable by law does not equal that caused by tuberculosis. We have no cure yet for internal tuberculosis. We can only prevent. We must suppress all sources of infection as far as can be done. More important to humanity than any other work which can engage our attention is the suppression of tuberculosis. An obvious portion of the work I have presented to you to-night. Your aid and support are needed, and I know will be rendered.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

CLERGYMEN AND QUACKERY.

It is a deplorable fact that the clergy are very prone to advocate patent medicines and quack methods of treatment. Perhaps the quacks, recognizing the influential position of the clergyman in the community, more often select him for a dupe, that others may follow his example. Like a robber—first capture the shepherd (or should we say the bell-wether) in order to steal the flock. Or is it that the preacher has within him a treacherous leaning toward the mysterious, the transcendental, which makes him an easy victim of the professor of hocus pocus? Whatever the cause, the fact stands that few forms of quackery which have ever thriven upon the credulity

of an ignorant public have lacked the support of one or many of these reverend gentlemen.

Bishop Berkeley, with his tar water, was not the first, nor, alas! was he, by many thousands, the last. There lies before us now a newspaper bearing an advertisement of a medicine for the nerves. The medicine is named after a famous French neurologist (who never heard of it), and contains at least one, possibly more, of the powerful nerve stimulants which are known to enslave many who use it. The advertisement contains a testimonial from a certain D. D., LL. D., who doubtless is, as the advertisers assert, "the best-known preacher, editor, author and philanthropist in New England." The advertisers say "there is not a more famous man alive in America to-day;" and whether this is strictly true or not, certainly we all know him by reputation these many years, for he is now a *hale* old man. But here he is recommending to the public a medicine as "invaluable in insomnia and all nervous diseases," which there is no more right, consistency, or propriety, in his recommending than if it were whisky or morphin!

This instance reminds us of the character of Berkeley as drawn by Sir. James Mackintosh: "Ancient learning, exact science, polished society, modern literature and the fine arts contributed to adorn and enrich the mind of this accomplished man." And we are also reminded of Dr. O. W. Holmes' comment: "Berkeley himself afforded a remarkable illustration of a truth which has long been known to the members of one of the learned professions, namely, that no amount of talent or of acquirements in other departments can rescue from lamentable folly those who, without something of the requisite preparation, undertake to experiment with nostrums upon themselves and their neighbors."

Many a physician is able to say truthfully and sorrowfully that the clergyman, the very man in his whole community to whom he thought he might look for help in his battle against the ignorance and superstition of the people, not only disappoints him, but actually proves the most

troublesome and dangerous ally of charlatanry with whom he has to deal. Why is it that so many of them are found giving testimonials to all sorts of humbugs? Are they more credulous than most men? or do they lack penetration? Are they so accustomed to the rôle of teacher that the assumption grows upon them that they are able to instruct the people upon medical science as well as theology? What cause or causes account for the facts? *Quien sabe?* Who knows? Certain it is that the facts warrant us of the medical profession in saying politely but firmly, "Men and brethren, ye are trespassing. May it please you to confine yourselves to the religious field. We will attend to the medical."

AND TEMPERANCE.

Occasionally we find in a non-medical journal an utterance so true, from the medical man's point of view, that we cannot refrain from alluding to it or reproducing it. The occasions are not frequent, more's the pity; but that sometimes the layman gets enlightened, perhaps through some medical friend, is encouraging. In this instance it is the "temperance" side of the question which has aroused the writer rather than the danger from any other drugs than alcohol; but his arraignment of the clergy for testifying to they know not what, follows so appropriately in the lines of our preceding editorial that we quote it in full. Says the *Boston Transcript*:

"A well-known clergyman says, over his own signature, that a certain patented medicine, 'if widely and wisely used, would relieve nervousness, soothe restlessness, reduce sickness, strengthen the body, invigorate the mind, and add happiness to life.'

"This is an especially good word to say for alcohol; for it is only the alcohol in the medicine referred to that has any medicinal value, in the opinion of the officers of the commonwealth who have caused it to be analyzed. This medicine or tonic contains 21 per cent. of alcohol,

and is purely a stimulant, the same as is the glass of whisky, which the unsophisticated people who drink their alcohol under another name regard with holy horror. It is a puzzle to persons having consciences how a minister of the gospel can allow himself to recommend any universal cure-all, knowing, as he ought to know, that no combination of drugs is equally good for all persons; but, when a minister of truth goes a step further and unreservedly and by false pretence recommends his parishioners and the public generally to take to dram-drinking, language cannot readily be found adequately to characterize the enormity.

“ It will not do to say that the minister did not know that the medicine he recommends contains alcohol and nothing else of value. He might have known, had he been as eager to ascertain the truth as he appears to have been to say something agreeable to the proprietors of the medicine in question; for the information is easily obtainable by anybody who desires it.

“ But the clergyman in question is in reputable company. Among those besides himself who have given in their testimony to the great value of this alcohol-in-masquerade are a Vermont physician, an Iowa business man, a Maine judge, the proprietor of a New Jersey temperance hotel, a South Dakota lady, a Congregational minister's wife in Minnesota, a Kansas physician, an aged Connecticut clergyman, a prominent Methodist pastor, and a widely known temperance reformer. Not one of these, probably, for love or money, could be induced to partake of a drop of intoxicating-liquor, knowing it to be such; but, nevertheless, they publicly advise people generally to brace up on alcohol under a lying name, and presumably brace up on it themselves. Else, how could they tell of its invigorating effects?

“ Either they know what they are recommending or they do not know. In either case, as disciples of temperance and as conscientious men and women, they are doing a wicked thing, unless, in their opinion, dram-drinking is a healthful instead of a hurtful practice. Even in

this case, they are guilty of hypocrisy or cowardice in attempting to disguise their sentiments.

"Let it not be supposed that the medicine referred to is the only one in the market whose extensive sale is based upon the fact that it is merely alcohol in masquerade. There are many others, and not a few of them are especially recommended as 'temperance drinks.' In a list of sixty-one 'tonics and bitters' which have been analyzed by the State Board of Health, and which contain alcohol in volume all the way from 6 to 47 per cent., we find one that purports to be 'not an alcoholic beverage,' which contains 6 per cent. of alcohol; one that 'contains no spirit,' and yet assays 6.1 per cent. alcohol; one that is 'not a rum drink,' but contains 13.2 per cent. of alcohol; one containing 19.5 per cent., which is advertised as 'entirely harmless;' a sulphur bitters, said to 'contain no alcohol,' but which contains 20.5 per cent. of alcohol and no sulphur; one that is 'entirely vegetable and free from alcoholic stimulants,' that is no less than 25.6 per cent. alcohol; one that is 'recommended for treatment of alcohol habit' that contains of alcohol 26.5 per cent.; one that is heralded 'a non-intoxicating stimulant, whisky without its sting,' that has a percentage of 28.2 per cent. of alcohol; and one which is 'purely vegetable' and 'recommended for inebriates' that contains 41.6 per cent. of alcohol. The dose recommended upon the labels of these preparations varied from a teaspoonful to a wineglassful, and the frequency also varied from one to four times a day, 'increased as needed.'

"The health authorities of the state class all these as 'tonics and bitters,' and many of them bear one or the other of these characterizations on the label; but very many of them are recommended under designations which make their disguise more difficult to penetrate. In no case is it the medicine that it purports to be; and in every case, so good medical authority says, the sole value consists in the stimulating effect of the alcohol.

"If alcohol is really so beneficial as some of the teachers of healthful habits, of morality and of righteous-

ness, would have us believe from their 'unsolicited' praise of alcoholic drinks under misleading titles, why not remove the bane entirely from the sale of intoxicants, and have it frankly announced everywhere, not excepting the pulpit or the Sunday-school, that rum, gin, brandy, whiskey, etc., 'if widely and wisely used, would relieve nervousness, soothe restlessness, reduce sickness, strengthen the body, invigorate the mind, and add happiness to life'?"

ANOTHER FORM OF ETHICAL OBLIQUITY.

The most insidious quackery is not outside of the profession. The most culpable writers of testimonials to patent medicines are not the clergymen. They are medical men, who, while they may have a fair degree of mental astuteness, or may have improved good opportunities for education and may hold prominent positions, have a certain bias in their moral faculties which allows them to twist themselves about, in stating scientific opinions, in a way which opens their pocket on the side next to the appreciative manufacturer. You read in a medical journal an article which purports to be purely scientific; or you listen to a lecture from one you have been led to suppose devoted to the study and elucidation of medical truth, and by and by you perceive that science is being juggled with to produce certain illusions. A recommendation of a certain proprietary article is dragged in, and you are chagrined and disgusted. Your confidence has been imposed upon. Or, perhaps (begging your pardon), you do not perceive the illusion; for there must be some among readers and hearers who are bamboozled, else such tricks would not continue to be practiced.

A lamentable feature is that journals can be found to publish such articles and lectures. Possibly the editors do not perceive the imposition upon the reader and the fraud upon legitimate medical literature. Possibly they do. Probably they do not care. But the discriminating reader will perceive it; and while he laments it he will

resent it as an insult to his intelligence, as a traitorous attack upon truth, and as a disgrace to the profession which he loves.

DR. GEORGE OLIVER BUTLER.

George Oliver Butler, one of the younger sons of Oliver and Catherine Pease Butler, was born February 23, 1833, in Amelia, Clermont Co., Ohio, where he passed his boyhood days and obtained at the district school the knowledge that prepared him for the Clermont Academy, at New Richmond, Ohio, graduating in 1847. Two years later he commenced the study of medicine with his uncle, Leavitt T. Pease, a physician of exceptional skill and learning, residing in Williamsburg, Clermont Co., Ohio.

He matriculated at the Cleveland Medical College, now the Medical College of Western Reserve University, and received the degree of Doctor of Medicine February 13, 1854. Returning to Williamsburg, he began the practice of his profession, remained one year, and went to Virginia. It was soon after this time that he married, December 13, 1855, Cordelia L., daughter of the late Dr. M. C. Parker, of this city. A residence of one year and a half in Mount Pleasant, Virginia, preceded his location in this city, where he was destined to end his days, with the exception of a period between August, 1862, and May, 1863, when he enlisted in the 103rd O. V. I., and was made assistant surgeon, a position he was obliged to relinquish owing to failing health.

He was a charter member of the Cleveland Academy of Medicine and the Cleveland Medical Society, also a member of the Cuyahoga County and State Medical Societies. Under Cleveland's first administration he was secretary of the Board of Examining Surgeons of the Pension Bureau. For twenty-four years he has been an active member of Owatonna Lodge No. 62 K. of P., and filled the highest office in the subordinate lodge, besides being the only medical examiner of Section No. 226 of the Endowment rank K. of P. since its organization. Of his



GEORGE OLIVER BUTLER, M. D.

professional work no instance was more gratifying to the doctor than his successful treatment of three cases of tetanus, published in the *Medical and Surgical Reporter* in the early part of 1871.

Dr. Butler had enjoyed good health to within a few days of his illness, Oct. 28, 1897, when he had a severe attack of angina pectoris, followed by confinement to his bed, but with fair prospect of recovery, until the appearance, on the afternoon of November 3rd, of unmistakable signs of dissolution. Death came to his relief at 8 A. M., November 4, 1897, in his sixty-fifth year.

As a member of the community, he was widely and favorably known. As a physician, his broad intelligence, conscientiousness and kindness of heart made for him a name, while living, that was a household word in many homes, and, now that he has passed from our midst, a memory that is enshrined in many hearts.

J. H. BELT.

Periscope.

SODIUM THIOSULPHATE AS AN ANTIDOTE FOR HYDROCYANIC ACID.

Until Johann Antal (*Pharmaceutische Zeitschrift für Russland*, 33, 518) proposed cobaltous nitrate as an antidote for prussic acid poisoning, no reliable or efficient means for counteracting it was known, aside from the stimulation of the respiratory center and artificial respiration.

The value of cobaltous nitrate in such poisoning we corroborated in a study of the various antidotes recommended up to that time (On Antidotes for Hydrocyanic Acid, CLEVELAND MEDICAL GAZETTE, June, 1895). Recently Lang (*Pharmaceutisches Centralbl.*, 37, 755) found that sodium thiosulphate counteracted the action of from $1\frac{1}{2}$ to 5 times the poisonous dose.

In corroboration of Lang's results we found that if the antidote be administered simultaneously with or immediately after the acid, little or no influence on the toxic effect is noticed. If, however, the antidote be exhibited before the taking in of the poison, while spasms

usually occur, the peculiar cry is absent and the animal rarely succumbs. Given in this manner, it always proved itself effective, whether administered hypodermically or internally. But from our experience with it we are led to believe it less reliable than cobaltous nitrate, while a solution of the latter is very permanent, whereas one of thiosulphate soon deteriorates.

Lang claims that the cyanids are excreted as harmless sulphocyanates, the sulphur being furnished by the albuminous substances of the body.

OXYPHENYLSULPHONIC ACID AS A REAGENT FOR ALBUMIN.

The use of salicylsulphonic acid as a reagent for albumin was recommended some eight years ago by Roch (*Pharm. Centralb.*, 30, 549). Since then its applicability has been repeatedly corroborated (*Pharm. Centralb.*, 33, 31; 38, 60).

Lately Bourceau (*La médecine moderne*, 1897, No. 26) recommends a solution of 3 parts of oxyphenylsulphonic acid and 1 part of salicylsulphonic acid in 20 parts of water. One drop of this reagent added to 1 c.c. of urine precipitates the albumins as a white, transparent sediment. Peptone, propeptone, alkaloids, urates and phosphates are not precipitated.

PICRIC ACID STAINS.

To remove picric acid stains from animal tissue and skin, Prieur (*Rép. de pharm.*, 1897, 217) recommends that lithium carbonate be rubbed on the moist skin, when the yellow color will disappear.

Linen stained with picric acid is best treated by washing in water containing lithium carbonate in suspension.

SERUM-ALBUMIN CRYSTALS.

A. Michel (*Abstract in Chemisches Centralbl.*, 1896, 1, 757) has prepared the crystals from horse's blood-serum and obtained them a centimeter long by precipitating the globulin in the serum by mixing the latter with an equal quantity of saturated solution of ammonium sulphate, filtering, and adding ammonium sulphate solution until beginning cloudiness appeared. The crystals of albumin sink and are purified by repeated solution in water and precipitation with ammonium sulphate. According

to August Gürber the blood-serum of the rabbit is the only other one which gives crystals.

THE PROTEIDS IN LEUKEMIC URINE.

According to Rudolph Kolisch and Richard Burian (*Zeitschr. klinisch. Med.*, 29, 374) albuminuria is not a constant feature in leukemia; when present it originates in a decomposition of the leukocytes, the increase in alloxuric substance in the urine supporting this view. The principal new point made out in the case described is the occurrence of Lilienfeld's histon in the urine.

EXCRETION IN DIABETES.

Ernst Tenbaum (*Zeitschr. f. Biologie*, 1896, 33, 379) claims that the increased amount of food taken by diabetics accounts for the increased quantity of urine and amount of nitrogen excreted. The calcium salts in the urine increase in proportion, and the amount excreted seems to depend solely on the increased nutriment taken.

Ludwig Lindemann and Richard May (*Chemisches Centralbl.*, 1896, I, 932) found that in a healthy man, when rhamnose was given, about eight per cent. of the amount given was recovered in the urine; in a diabetic patient, 11.7 per cent. was recovered in the urine and 4.4 per cent. in the feces; dextrose was excreted simultaneously, but the nitrogen excreted was diminished from 17 to 14.8 grams per day. Rhamnose seems, therefore, to save the destruction of proteids.

SPENZER.

Among Our Exchanges.

Some French surgeons have been in the habit of exciting aseptic inflammation in the sac of *hydrocele* by inserting through the canula used in tapping, about eight inches of medium sized catgut ligature and leaving it in the sac. Their claim that it is followed by less pain and is fully as likely to effect a cure as are the irritant injections commonly employed is confirmed by DR. GEO. G. VAN SCHAICK of New York, who reports several cases treated by this method.¹ All were cured. In two cases there was pain, followed by a re-accumulation of fluid, and in one of these a swelling of the testicle, but the fluid was

¹ Med. Rec., Oct. 30, '97.

reabsorbed after a time, and the swelled testicle returned to its normal size. The technique is as follows: The scrotum, thoroughly disinfected, is tapped with a small trocar; in order to secure a rather slow evacuation of the fluid, a catgut ligature of medium size is introduced within the canula as soon as the serum begins to flow, and rapidly pushed through the canula within the tunica until about eight inches has passed in. When all the liquid has been evacuated the canula is removed and the catgut hanging out of the puncture is snipped off with scissors as close as possible to the scrotum. By manipulating the scrotum the cut end of the ligature is drawn within the tunica and the wound is sealed with collodion. There is no danger of infection if asepsis be perfect. There is no febrile movement, and the nauseating pain, sometimes occurring after injections of iodine, is ordinarily absent. The profession is evidently studying with great earnestness the treatment of *inoperable cancer*, and seems to be drifting toward the use of escharotics in a more dilute form. DRs. CERNY and TRUNECEK of Prague have been experimenting with arsenious acid in solution, and a fairly dilute solution at that, and report better results than with pastes. So far they have treated only ulcerated superficial growths, but their diagnosis has in each case been verified by microscopical examination. The solution is arsenious acid 1 part, alcohol and water each 75 parts. The sore is first thoroughly cleansed by vigorously rubbing or scraping the raw surface till blood exudes. The surface is then thoroughly moistened with the solution and allowed to dry. The solution should be shaken before using. The pellicle which forms over the ulcer after the solution is applied is the only dressing needed. The solution is applied daily over the scab. By and by the margins of the scab tend to loosen, and at length it is retained in place by a few loose adhesions only. These are severed and the scab removed. The arsenical solution is now re-applied to the ulcer, and if on the next day the resulting scab is thin, light yellow, and easily detachable, it indicates that no cancerous growth is in the tissues. A dark-colored, firm and closely adherent scab, however, indicates that the daily applications must be repeated till the scab again separates as before. The thicker the scab, the stronger the solution should be made, as high as 1 part arsenious acid to 80 parts alcohol and water being sometimes indicated. When the cancerous

tissue has been all destroyed, there remains a granulating wound covered with a delicate white pellicle which is to be dealt with on general principles. Some pain usually follows the application of the solution, but it is by no means intolerable like that which follows the application of escharotic pastes. In the treatment of *lupus*, also, DR. KACHANOVSKI appears to have come upon a promising method of treatment by the external application of permanganate of potassium.³ Dehydrated crystals, freshly powdered, are applied in a layer one-eighth of an inch thick over the whole ulcerated surface and over the suspected portion adjacent. A layer of absorbent cotton is applied over the whole to keep the powder in place and absorb discharges. Where the ulceration is deep, with undermined edges, curettement precedes the application of the powder. In the thirty odd cases in which he has used this method there has been no failure to cure, and in most cases but a single application of the powder was necessary.

Among the older practitioners, *oil of wintergreen* was a favorite ingredient of liniments to be used in allaying local pains in joints and nerves. G.-H. LEMOINE⁴ has been treating *rheumatism* quite successfully by the external application of the oil of wintergreen (which is 90 per cent. salicylate of methyl) to the affected parts. The oil is poured on a compress, covered with gutta percha tissue, and held applied with a bandage. Twenty to thirty drops is sufficient to use at a time. It acts as much by absorption as locally and appears to be more prompt in relieving the pains of *acute rheumatism* than sodium salicylate used internally. Moreover, it is far less likely to cause vertigo and tinnitus. It is said to be likewise useful for the pains of *locomotor ataxia* and *Pott's disease*. A remedy of repute as a vulnerary among the Indians was *senecio aureus*, and among the early settlers and afterward by the botanic doctors it was much used as a regulator for the uterine functions, being given to promote the flow if it were too scant, or to check it if it were too profuse. It would seem, however, from the statements of DR. F. GUNDRUM of Sacramento, Cal.,⁵ that the drug has a real value as a hemostatic in parenchymatous hemorrhages. Teaspoonful doses of the fluid extract three times a day checked for him, within two days, a provokingly obstinate case of *hematuria* which for six months had resisted the usual

³ Georgia Jour. Med. & Surg., Oct., '97.

⁵ Therapeutic Gazette, Oct. 15, '97.

⁴ Semaine médicale, May 12, '97.

hemostatics. In another case, where the hematuria came on after puerperal convulsions, marked benefit followed the exhibition of *senecio* within twenty-four hours. Like good resulted from giving it in a case of *hemoptysis*, and again in a case of *menorrhagia*. The dose given in the dispensaries is far too small to produce any effect whatever. From one to two fluid drams three to six times a day are necessary to secure the results desired. According to DR. JOSEPH ADOLPHUS of Atlanta, Ga.,⁶ *cannabis indica*, which is of especial value in the *migraines* and other neuroses connected with menstrual irregularities as well as the *diarrheas* of teething children, fails us often because given in too large doses at too long intervals. To secure its best effect, one or two minims of a reliable fluid extract should be given every half hour or hour to an adult and one-eighth minim to a child. Dropped on a little sugar it is not unpleasant to take. Fluid extract of *cannabis* is hard to mix with syrups or watery solutions, as the extract separates in gummy flakes and floats to the top, but it mixes well with pure glycerin. If by reason of their synergistic action in rheumatic conditions we are ever tempted to prescribe *antipyrin* and *sodium salicylate* together, we should bear in mind the caution of DR. WM. J. ROBINSON, of New York,⁷ and always prescribe them in solution. Though neither salt singly is markedly deliquescent, the mixture is rapidly liquefied, much to the discomfiture of the doctor who is so unfortunate as to prescribe it, and to the disgust of the patient who finds in the box only a few wet folded papers to assuage his suffering. Some months ago we had occasion to call attention to the excellent results following the use of dilute solutions of *picric acid* in the treatment of extensive *burns*, its antiseptic properties, its anesthetic effect, and, above all, the protective pellicle which it forms over the denuded surface, giving it decided advantages over the remedies usually employed heretofore. Recognizing the value of these properties in the drug, DR. C. M. ALLAN⁸ has availed himself of them to allay the irritation and check the discharge from eczematous and ulcerated surfaces. He uses it, however, in more concentrated solution, viz., a saturated solution of *picric acid* in one part alcohol and two parts distilled water. It is sprayed over the affected surface, which is afterwards covered with a medicated plaster. He finds also that in recent wounds the

⁶ *American Med. Jour.*, Nov., '97.

⁸ *Brit. Med. Jour.*, Feb. 20., '97.

⁷ *New York Med. Jour.*, Oct. 30, '97.

picric acid solution is beneficial, often obviating the necessity of skin grafting. Moreover, in obstinate capillary hemorrhage after operations, hemorrhage which the application of hot water may control but imperfectly, he reports that after applying the hot water, spraying the surface with the picric acid solution, or packing the cavity with gauze wrung out of it, the bleeding is promptly controlled. If further experiment shall confirm these claims, we have in picric acid a valuable addition to our surgical resources — efficient and cheap. TUCKERMAN.

New Books.

A LIBRARY OF THE WORLD'S BEST LITERATURE, ANCIENT AND MODERN.
Charles Dudley Warner, Editor. Hamilton Wright Mabie, Lucia Gilbert Runkle, Geo. H. Warner, Associate Editors. Thirty volumes.
New York. R. S. Peale, J. A. Hill, publishers. 1897. Sent by Harpers Weekly Club, 91-93 Fifth Ave.

Many physicians find high enjoyment in reading good literature. Many more would indulge in this delightful recreation and means of culture, but for lack of time. To have good literature at command is one of the necessities of life to the lover of learning. But to have the best literature which the world has produced in all the ages made accessible in the home in convenient form is a refinement of luxury that few of us had ever dared to hope for. Not a busy doctor in the land could have expected ever to be able to survey the world's literature and attain any adequate idea of its varieties, its scope, its peculiarities, its values, its beauties, as seen in this or that age or language era, school, or author. But here the whole field has been culled by competent scholars, who give us in this library the fruits of their labors. Here we may survey all of it that we could wish. Not one of our scarce and precious spare moments or rare hours of leisure need be wasted in prospecting, in surveying the ground and opening the mine. The mine is opened, pure gold is in sight, and we help ourselves to enough.

The Library gives selections of the finest specimens of history and oratory, of romance and poetry, of science and philosophy, of biography, of wit and humor, of the drama, of the sacred books, of the great epics, of oriental literature and of ballads and folk song. These masterpieces from the various departments of literature one would expect, but these are not all. There is a biograph-

ical dictionary of authors, which contains the names of all the authors of permanent literary reputation, giving data of their lives, titles of their most famous works, outline of career, and whether best known as historian, poet, scientist, orator, statesman, humorist, and so on. There are also histories of the world's various literatures, for instance, Chinese literature, Egyptian, Arabic, Latin-American, Celtic, Provençal, Anglo-Saxon, and numerous others. These histories are prepared by competent scholars, many of whom have spent the best efforts of their lives in the study of the special fields of which they write. These historical essays enable the reader to view philosophically the effects of tradition, and of the spirit, the characteristics and the tendencies of the various literatures upon the thought and sentiment of the whole world. The editors have had the assistance in this great undertaking of an able advisory council and a large corps of scholars, critics and literati in special lines, who have prepared essays and articles upon the great literary lights and their achievements; essays and articles biographical, critical, historical, interpretative of the authors and their works.

The Library also contains more than a thousand authors' portraits, and these are fine specimens of the engraver's art.

We have examined a number of "Libraries" and "Encyclopedias" of literature, some of them excellent and valuable; but we have never seen any approaching the one now before us in admirable and attractive features, or, so far as we are able to judge, in value to students of literature and cultivated readers of all classes.

We have never seen, and do not know that there ever before was presented so good an opportunity for critical study and comparison of various literatures and different writers, by any one who had not his whole lifetime to devote to the subject.

To the busy professional man who loves to read, yet has scant time; who longs for the treasures of the great libraries, yet has not means at his command; who hungers after a knowledge of the great thoughts and sublime expressions which have moved the hearts and convinced the minds of men, yet never has had them placed within his reach—this library comes as a veritable feast, as a great boon. It will delight not only the doctor, but the doctor's family and friends, from the oldest to the youngest reader.

LECTURES ON THE MALARIAL FEVERS. By Wm. Sydney Thayer, M. D.,
Associate Professor of Medicine in The Johns Hopkins University.
New York: D. Appleton & Company, 1897.

The discovery of the malarial parasites, the tracing of their life history and of the constant relation of certain stages in their life cycle to the phenomena of malarial fevers, and finally the demonstration of the manner in which these parasites produce pathological changes form one of the most interesting chapters in the history of medicine. No one can read the story so happily told in these lectures without feeling a glow of pride in medicine as a science. To those who have not followed the work of investigators as published in current medical literature of recent years, the facts set forth in this book will come as a revelation. The work is timely, and it is not too much to hope that it will help to revive an interest in the study of malarial disease and to do away with much of the looseness in the use of the term *malaria*, and help also to do away with the too common mistake of treating typhoid as malarial fever.

The description of the malarial parasites and of the changes wrought by them in blood elements, as also the directions for the microscopic work in their study, is clear and easily understood, and this portion of the work will form a good hand-book for learners and busy practitioners. The clinical descriptions are all that can be desired, while the chapters on sequelæ, morbid anatomy and general pathology will prove especially interesting to those who have had much experience in the treatment of malarial affections. The causes of many well-known but, until recent years, unexplained phenomena occurring in chronic malarial poisoning, are plainly pointed out.

Under the head of Mechanism of Defense it is interesting to note the observations and reasoning which lead the author to the opinion that in spontaneous recovery from malarial fever the disappearance of the parasite is due to some parasitocidal substance developed in the course of the disease, rather than to direct assaults of phagocytes. In this connection the question might be raised as to the *modus operandi* of quinin in malarial disease, but like most writers on the subject the author seems to have no doubt of its direct toxic action on malarial organism. The chapter on diagnosis, prognosis and treatment contains a wealth of information, and will be recognized as sound by those who have had a large experience in malarial neighborhoods. Quinin, of course, is recognized as the great

specific, and the valuable advice is given to administer the drug in solution or in readily soluble form. Probably many disappointments in the use of quinin have arisen from neglect of this simple measure. Attention is called also to the great value of rest as a means of cure.

The author's experience appears to lead him to the conclusion that quinin, if tolerated by the patient, will arrest every case of malarial fever, nevertheless many old practitioners will insist that cases of malarial intermittents and remittents are occasionally met which will not yield to quinin alone, that a mercurial purge or alterative doses of mercury or an emetic or some such treatment will prepare the way for a more successful use of the great remedy. If these views are founded in fact the explanation may be found, perhaps, in morbid conditions, especially of the liver, described in the body of the work.

The charts and plates are excellent and the material and mechanical work are all that can be desired.

This book commends itself, and the verdict of the profession will probably be that as a treatise on malaria it has no superior in the English language.

W. A. KNOWLTON.

THE MENOPAUSE. A Consideration of the Phenomena which Occur to Women at the Close of the Child-Bearing Period, with Incidental Allusions to their Relationship to Menstruation. Also a Particular Consideration of the Premature (especially the Artificial) Menopause. By Andrew F. Currier, A. B., M. D. D. Appleton & Co., New York, 1897. Pp. 309. Price, \$2.00.

This is a new book dealing with an old theme. Nevertheless its appearance is justified by the fact that the author does not present us with a mere rehash of the writings of others, but, while giving us a résumé of our present knowledge upon the subject, has added the results of his own long experience and careful observation. Truths not new in themselves are presented again and their importance is enforced by the careful and interesting manner in which they are dealt with. The author controverts the traditional and still widespread teaching that the menopause in itself is especially dangerous, or that cancer of the uterus or of the breast, although often coincident with, is necessarily connected with the menopause as closely as has been taught.

In speaking of the treatment of the various ills and complaints of patients who are passing through the meno-

pause, he insists upon the necessity of a careful examination in order to determine whether a benign or malignant condition exists, and whether a more or less important surgical procedure should not take the place of a mere symptomatic treatment which often leads to the indiscriminate use of drugs, which, however profitable to the physician or the druggist, often leaves the patient in a condition of confirmed invalidism.

The portion of the work devoted to the subject of the artificial menopause contains many instructive suggestions. Altogether it may be said that the book as a whole constitutes a timely addition to our knowledge upon the important subjects with which it deals, and may be read with profit both by the general practitioner and the specialist. We take pleasure in recommending it to the medical profession.

HUNTER ROBB.

THE ESSENTIALS OF OBSTETRICS. By Charles Jewett, M. D., Professor of Obstetrics in the Long Island College Hospital, assisted by Harold F. Jewett, M. D. With 78 illustrations and 3 colored plates. 12mo. 356 pp. Lea Brothers & Co., New York and Philadelphia; 1897. Cloth, \$2.25.

This is well named the "Essentials of Obstetrics," as its pages cover every topic needed by the beginning student, stated in a concise, clear and readable style, without the discussions and elaboration which may confuse the beginner and obscure the really essential points. After one chapter devoted to the anatomical essentials, separate chapters treat first of the physiology of pregnancy, of labor, and of the puerperal state, followed by those on the pathology of the same conditions. The last chapter is on obstetric surgery. Interest in examining a book on this subject is likely to center about the practical points of management of labor. In this respect Dr. Jewett has brought his book fully up to the present standard of advanced practice. One of the features first noticed is the prominence given to the subject of abdominal examination, and the fulness and clearness with which it is explained. A number of illustrations aid materially in giving correct ideas of the positions of the hands in palpating. The subject of vaginal examination, on the other hand, while the points of information to be secured by it are succinctly stated, occupies less than a page. Under external examination are included concise direc-

tions for pelvimetry, while further along, under pathology, the various pelvic deformities are defined and considered with reference to diagnosis and management of labor in their presence. The subject of antisepsis is treated with care and exactness of details, but one finds no mention of formaldehyd. Operation for immediate repair after laceration of the pelvic floor is advised, and the methods of suturing after the various kinds and degrees of injury are clearly explained and illustrated in accordance with the anatomical principles involved in such injuries as now understood. In the chapter on obstetric surgery, turning to the subject of forceps delivery, we find precisely the points of instruction needed by the student for proper application and management of the forceps. For high application the Walcher position is recommended. Symphysiotomy is considered with unusual fullness. The open method is recommended and its technique is clearly explained and well illustrated. While the subject of obstetrics is far too large, even within the limits of its book knowledge, to be learned from a manual of this size, the systematic arrangement and classification of topics and corresponding typography of such a book have yet great value to the obstetric student, after he has secured his diploma as well as before, in keeping well before his mind the due relation and extent of the various parts of the subject.

PAMPHLETS RECEIVED.

A. F. HOUSE, M. D., of Cleveland: **THE OPERATIVE TREATMENT OF PROLAPSE OF THE VAGINA AND UTERUS**; from *Am. Jour. Med. Sc.* **THREE INTERESTING CASES OF ABDOMINAL SECTION**, with Technic of Operation; from *Cleveland Jour. of Medicine*.

JAMES T. JELKS, M. D., of Hot Springs, Ark.: **THE PATHFINDERS**; Delivered to the Graduating Class of Barnes Medical College, St. Louis, Mo., March 17th, 1896; from *Jour. Am. Med. Ass'n*.

C. H. HUGHES, M. D., of St. Louis: **A NEUROLOGIST'S FAREWELL**—Valedictory to the Graduating Class, Barnes Medical College; from *Alienist and Neurologist*.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION, at its Twenty-First Annual Meeting, held at Washington, D. C., May 4, 5 and 6, 1897; from *Jour. Cutan. and Gen-Urin. Diseases*.

MATTHEW WOODS, M. D., of Philadelphia: **SOME OBSERVATIONS AND EXPERIENCE IN THE TREATMENT OF EPILEPSY ACCORDING TO THE METHOD SUGGESTED BY FELIX VON NIEMEYER**; from *Jour. Am. Med. Ass'n*.

H. R. STORER, M. D., of Newport, R. I.: CRIMINAL ABORTION—ITS PREVALENCE, ITS PREVENTION, AND ITS RELATION TO THE MEDICAL EXAMINER—Based on the "Summary of the Vital Statistics of the New England States for the Year 1892," by the Secretaries of the New England States Boards of Health; from *Atlantic Med. Weekly*.

LEWIS S. SOMERS, M. D., of Philadelphia: ATROPHIC RHINITIS; from *The Laryngoscope*. HEREDITARY DEAFNESS; from *Medicine*.

GEORGE BEN JOHNSTON, M. D., of Richmond, Va.: SPLITTING THE KIDNEY CAPSULE FOR THE RELIEF OF NEPHRALGIA; from *Medical News*. SYMPTOMS AND TREATMENT OF HEPATIC ABSCESS, with Report of Seventeen Cases; from *Trans. Am. Surg. Ass'n*. ACQUIRED UMBILICAL HERNIA IN ADULTS; from *Medical Register*. VALUE TO THE PUBLIC OF STATE MEDICAL SOCIETIES; Presidential Address, Medical Society of Virginia, Hot Springs, Sept. 1, 1897; from *Med. Register*. COMPARATIVE FREQUENCY OF STONE IN THE BLADDER IN THE WHITE AND NEGRO RACES; from *Trans. Southern. Surg. and Gynec. Ass'n*.

CHARLES R. ROBINS, M. D., of Richmond, Va.: STONE IN THE KIDNEY; from *Virginia Med. Semi-Monthly*.

PARKER SYMS, M. D.: BUNION; ITS ETIOLOGY, ANATOMY AND OPERATIVE TREATMENT; from *New York Med. Jour*. APPENDICITIS: WHEN TO OPERATE AND HOW TO OPERATE; from *New York Med. Jour*.

CHARLES P. NOBLE, M. D., of Philadelphia: SOME FURTHER OBSERVATIONS CONCERNING MOVABLE KIDNEY; from *Am. Jour. Obst. and Gynec.* REMARKS ON THE USE OF THE BURIED PERMANENT SUTURE IN ABDOMINAL SURGERY; from *Am. Gynec. and Obstet. Jour.* A CLINICAL REPORT ON THE COURSE OF PREGNANCY AND LABOR AS INFLUENCED BY SUSPENSIO UTERI; from *Am. Gynec. and Obst. Jour.* THE DEVELOPMENT AND THE PRESENT STATUS OF HYSTERECTOMY FOR FIBROMATA; from *Gynec. Transactions*. A CONTRIBUTION TO THE TECHNIQUE OF OPERATIONS FOR THE CURE OF LACERATION OF THE PELVIC FLOOR IN WOMEN; from *Am. Gynec. and Obstet. Jour.* VAGINAL INCISION AND DRAINAGE OF SUPPURATING HEMATOCELE DUE TO ECTOPIC GESTATION; from *Am. Gynec. and Obstet. Jour.* A NEW METHOD OF SUTURING THE ABDOMINAL WALL IN CELIOTOMY; from *Am. Jour. of Obstet.* ECTROPION OF THE CERVIX IN NULLIPARAE RESEMBLING LACERATION OF THE CERVIX; from *Am. Gynec. and Obstet. Jour.*

Society Proceedings.

CLEVELAND MEDICAL SOCIETY.

At the meeting of September 10, 1897, the society was highly favored by having on the program a paper by DR. GEORGE W. CRILE of this city on "Experimental Research into Causes of Surgical Shock," illustrated by stereopticon views. The study of shock has occupied much of Dr. Crile's attention for the past three years, and

experiments have been performed on 150 animals to demonstrate as far as possible its etiology and treatment. This kind of work has been stimulated by the doctor's love for experimentation and by the positions held by him in connection with medical college work, formerly as Professor of Physiology, and now as Professor of the Principles of Surgery in the Cleveland College of Physicians and Surgeons.

The result of three years of toil was recently compiled and forwarded to Columbia College in New York City, in response to a call for original researches in any of the several branches of medicine, for which the college offers the "Cartwright prize" (\$500) every other year. At the college commencement, held on June 9, 1897, it was announced that Dr. Crile was the successful competitor for the prize offered, which was open for universal competition, about one-half of the contestants for the present year being foreigners.

The doctor's work, *Investigation* was for the purpose of establishing exact data relative to the production of shock, following various operations and injuries to which the different regions of the body are liable, including effects on the circulation and respiration, the effects being graphically traced with a pen-point on drums of a special appliance prepared for the purpose. The whole subject is soon to be placed in book form by the Lippincott Co., and will no doubt be looked for with great interest by the readers of the GAZETTE.

The paper deals with but one branch of the subject and yet owing to the amount of matter presented, it is not practicable to give more than a brief review, as follows:

Shock is not an entity but is dependent upon a variety of factors, including the character of the injury or operation and the region involved. Cutting, tearing or burning the skin causes a marked change in the heart's action and the respiration; muscles less than the skin; connective tissue not at all; periosteal injury causes some change, though less than muscular; sawing, crushing or breaking bone has no effect, nor has operation upon the larger joints. Cutting, crushing, or otherwise severing the nerve trunks causes marked changes in both the blood pressure and the respiration.

Trephining the skull caused but little effect, separating the dura mater some rise in pressure. Cutting away bloodlessly a small portion of the cortex cerebri caused

but little change, though soon a fall was noted. Compound fracture of the skull and blows caused, as a rule, respiratory changes more marked than circulatory.

In gunshot wounds of the head, in fatal hammer fractures, respiration ceased before the heart's action. The same observation may be made in excessive intracranial pressure — respiration fails first.

Operations upon the eyes caused no change; when on the middle ear, very grave fall in blood pressure was usually noted; when on the tongue no change was noted. Injuries to the posterior nerves usually caused respiratory slowing, and cardio-inhibition; upon the under surface of the epiglottis and the superior opening of the larynx, usually arrest of respiration, and cardio-inhibition. Intra-laryngeal manipulation caused a sudden arrest of respiration and, if severing, in many instances a complete temporary arrest of the heart, due to the mechanical stimulation of the superior laryngeal nerves. Like manipulation of the trachea has no effect.

The "blow upon the jugular," so-called in sporting parlance, owes its efficacy to the mechanical stimulation of the vagus which the antagonist applies. With injuries upon the chest the respiratory changes are most pronounced and respiratory failure is prone to occur after operations in that region. Animals can effect a sufficient exchange of air in spite of double pneumothorax.

The slightest contact with the heart caused most striking changes in blood pressure. The same may be said of the large vessels near the heart. Injury of the heart muscles affects the circulation less than contact with the heart with coverings intact.

Shock developed in abdominal operations is mainly due to dilatation of the splanchnic area, the lesser factor being the effect on the respiratory center and the heart.

The tendency to shock production increases from the rectum upward. The pelvis is least productive of shock, the region of the pylorus and duodenum the most, all points between varying in correspondence with their relation to these parts.

Manipulation of the testicle, tunica vaginalis, or spermatic cord causes a striking fall in blood-pressure.

Manipulation of the ovaries, oviducts, uterus, or vagina causes a rise.

Operation upon the rectum causes usually a rise in blood-pressure and a marked increase of inspiration.

In certain operations on the brain there is marked

interference with the vasomotor centers. In intra-abdominal operations the splanchnic vasomotor dilation constitutes the principal immediate factor, as also in operations on the male genital organs. There was abundance of evidence that vasomotor tone was impaired. The respirations were always much affected, especially in operations in the abdominal cavity, and in the larynx. The respiratory factor is in importance probably next to the heart. The loss of cardiac tone, or rather exhaustion of the heart, is one of the most pronounced factors.

The heart may flag on account of over-stimulation; it may be inhibited in operations on the larynx, in ruptures of the vagus.

Discussion on Dr. Crile's paper was postponed for a future evening.

DR. L. B. TUCKERMAN presented a very interesting case, in which he had removed a portion of the skull for the cure of idiopathic epilepsy, and his report was followed by a brief but entertaining discussion.

C. W. SMITH.

CUYAHOGA COUNTY MEDICAL SOCIETY.

The November meeting of the Cuyahoga County Medical Society was held the evening of November 4th, Dr. Knowlton presiding. Dr. R. E. SKEEL read the paper of the evening on "The Diagnosis and Treatment of Puerperal Sappremia." (*To be published in the Gazette.*)

DR. ALDRICH reported two interesting cases. The first one of tetanus neonatorum, a female infant, white, six days old. The attendant midwife, on the second day, to stop a slight oozing, bound a piece of sod on the umbilicus. The second day following the separation of the cord the child was unable to open her mouth wide enough to nurse. Examination excited a well marked tetanic spasm. Circulation was rapid, temperature 103°, respiration rapid but regular, except during spasm, when there was marked cyanosis. Local heat, rectal feeding, chloral, bromids and hyoscyamus failed to give relief, and the child died in her eleventh day. Guinea pigs inoculated from the unhealed umbilicus failed to develop convulsions.

The second case was one of peliosis rheumatica, an American, single, 36 years old, strong and healthy in appearance, intemperate. Parents were healthy, but intem-

perate. In early life his father had suffered with rheumatism. In the fall of 1893 the patient "took a cold." After a feverish night made sleepless by severe pains in the knees and ankles, small blood-red spots were discovered thickly covering the lower extremities. In a few days these disappeared, passing through the color changes incident to contusion. Two months later the attack was repeated. In February, 1894, he was again attacked with the same trouble, the temperature reaching 103°. Ankles and knees were swollen, the forearms as well as the extremities being covered with the hemorrhagic spots. Since then he has had six attacks presenting the same clinical picture, and all occurring during the fall and winter months. The urine never contained albumin, sugar, or blood. On three occasions sore throat accompanied the attack. At no time has any cardiac trouble manifested itself. The arguments in favor of a rheumatic origin are: 1. It is always associated with joint symptoms. 2. It is excited by conditions of weather, season of year and exposure, recognized as exciting causes of rheumatism. 3. There are no other indications of infection. 4. Relief is obtained from salicylate of soda.

DR. A. G. HART opened the discussion. In his early practice he had seen a number of cases of tetanus neonatorum. It is his custom to superintend the bathing of the infant, seeing that it is thoroughly done. Since beginning this he has noticed fewer cases of tetanus in the new-born. In his experience he had found an absence of rigor mortis in death from tetanus.

DR. C. F. DUTTON suggested that the spasms of tetanus might be a reflex phenomenon, excited by injuries in certain parts, rather than to a specific bacillus. He raised the question of why tetanic convulsions were more common after injuries to the hands and feet. DR. D. S. HANSON'S explanation was that the hands and feet were more exposed than other parts of the body, and wounds in these members more liable to contact with soil, in which the bacillus of tetanus exists. Dr. Aldrich, in closing, spoke of the anærobic nature of the bacillus of tetanus and the consequent greater liability of infection in punctured wounds.

DR. L. B. TUCKERMAN reported a case of tuberculosis, presenting some interesting features. The patient, a man aged 23 years, with a bad family history, had, three years ago, a pulmonary hemorrhage. Under Koch's treatment he improved. During a year's residence in the

West he was in apparently good health. Returning to Chicago, he contracted a venereal disease, and shortly after this had chills and fever and soon began to cough. The injection of tuberculin was followed by diarrhea. Areas of dullness appeared in the chest. Last June symptoms of an infection of peritoneum appeared. On opening no effusion was found, but enlarged mesenteric glands. The wound was packed, and for four weeks there was an absence of the abdominal symptoms. Later they returned, also hemorrhage from the lungs appeared, and the patient died August 20th.

The discussion of the case was deferred, and DR. CORLETT called upon to give his account of the British Medical Society Meeting at Montreal. His report coincided with that of most Americans who attended—the papers poor but the entertainment good.

McMICHAEL.

Correspondence.

CLEVELAND, O., Nov. 20, 1897.

Editor Cleveland Medical Gazette :

Notwithstanding all our self-gratulations about the fine quality of *fin de siècle* medical practice and the high general average of scientific knowledge among legally qualified practitioners, there still occur individual instances of egregious ignorance which perceptibly lower that average.

It is reported on good authority that an Esculapian not far from your metropolis treated a man during nearly a month for what he diagnosed "bilious fever." At the end of that time the disease "turned" into typhoid fever, pursuing a still further course. Eye witnesses assert that during this man's sickness he was advised to get out of bed and use the *pot de chambre* whenever his frequent stools demanded, and in resorting to catheterism for the retention of urine the patient was required to stand upon the floor, with difficulty maintaining his equilibrium by holding onto the bedpost during the reckless operation. Probably the doctor reasoned that water runs easier downhill. We sadly fear that asepsis of the catheter never entered his mind. But the man recovered; which accords with the belief oft expressed, that kind nature sometimes steps in and asserts her power in the face of a haphazard diagnosis and bungling treatment.

The death of Dr. Albert G. Bissell, which occurred on November 10th at Glenville, O., presents peculiarly sad and tragic features. It also presents an example of the mental state leading to the suicide of an intelligent and educated gentleman, which it may be well to place on record for those studying the subject.

Albert G. Bissell was born in Vermont in 1826, coming of a family which has long been eminently respectable and often distinguished. He graduated with honors from the College of Physicians and Surgeons in New York in 1854, after which he located in Bay City, Michigan, where he pursued his calling for a number of years. During this period he held for some time the position of city physician. He then moved to Detroit, practising there several years, devoting some attention to surgery. It is said by those in position to know that from Detroit to the Northern Peninsula, Dr. Bissell's opinion on medical questions was held in considerable esteem. In his prime he took a keen interest in the medical societies, and was also a contributor to periodical medical literature. After removing to Cleveland some years ago, he practically retired from professional work, and being in the possession of some means, his declining years were passed in comfort, save the mental discomfort due to failing sight. On consulting an oculist and learning that he had cataract far advanced in both eyes, he became much depressed in spirits, and as the trouble progressed and vision failed he became quite despondent. He feared that with the loss of his sight his mind would give way, and he had a horrible dread of becoming an inmate of an asylum and associating with demented and lunatics. The sequel showed that for some weeks he must have determined upon self-destruction, yet out of consideration for his wife and her lady friend at whose house they were living, he refrained. The man of the house was away on business and the doctor evidently did not wish to burden the women with the duties that follow a death. But on the day when the other male member of the household returned, Dr. Bissell ended his life with a pistol-shot through the heart.

On the table in his room, and addressed to his wife, lay a letter which read as follows:

"My dear wife:—Blindness is fast closing my eyes to this world, and knowing that soon I shall be totally blind, and that the constant dread of such a terrible affliction will destroy my reason, I have determined to take

my own life. I know that self-destruction is forbidden by the laws of God, but I believe that blindness and insanity, or either of them, furnishes a sufficient justification for the act I feel compelled to do.

"I trust my cause to the judgment of my Creator, trusting that he will hold me guiltless of a willful disobedience of his command. I know you will be shocked and greatly grieved at such a termination of my life, but rest assured my departure will be best for me and for you. Trust in God, he will comfort you in this sudden bereavement when all other comfort fails, and I leave you in his protecting care. It is hard to leave you, but if I should remain it would cause you to be a sufferer in my great affliction. You will ever be my love in this world and in the world to come. God bless you for your constant kindness to me and for your gentle care of me. Trusting that we shall meet in heaven where afflictions never come, I am, as ever, your loving husband, Albert."

Occasionally, by mistake, the newspapers tell more truth than was intended. Doubtless some of your readers noticed recently, in a leading daily, an amusing instance. At a meeting of a medical society of the school of infinitesimals appeared a Dr. Blank, who made an address. The newspaper says:

"He (Dr. Blank) is an authority on insanity, and after speaking of the development of homeopathy, treated of his specialty in nervous practice."

CARLISLE.

Notes and Comments.

Sterilization of Books in Circulating Libraries. A procedure which must commend itself to all sanitarians has been recommended by Dr. John S. Billings to the New York Public Library Board, of which he is a director; namely, that each book when returned shall be disinfected with formalin before it is again issued.

Dr. Harrison Allen, of Philadelphia, died suddenly and unexpectedly on November 14th, of angina pectoris. Dr. Allen was born in Philadelphia in 1841, and educated in the public schools of that city and the Medical Department of the University of Pennsylvania, from which he graduated in 1861. After spending a year in Blockley

Hospital he entered the army, in 1862, and served as assistant surgeon, by 1865 ranking as brevet-major. Dr. Allen held numerous teaching positions at different times. In the Auxiliary Department of Medicine of the University of Pennsylvania he held for thirteen years the chair of comparative anatomy and zoölogy. He was Professor of Physiology in the Medical Department proper from 1878 to 1883. He was Visiting Surgeon to the Philadelphia Hospital for four years, and Assistant Surgeon to Will's Eye Hospital for several years, and also taught anatomy in the Philadelphia Dental College. He was a member of numerous medical and scientific societies, and was known as a specialist in diseases of the throat and lungs.

Extra-Mural Teaching. In a recent address before the New York Academy of Medicine, Dr. Osler suggested the adoption of the extra-mural system of medical teaching which for many years has been in vogue in Edinburgh.

Dr. James E. Pilcher, of the army, who is also Secretary of the Association of Military Surgeons, has been transferred from Columbus to Fort Crook, Nebraska. This will be a distinct loss to the profession of Columbus and of Ohio.

Progress in Specifics. *Mr. Williams*—Doctah, what is de mattah wid Ulysses Grant?

"*Doctah*"—He's 'flicted wid de plumbago, fum chew-in' lead-pencils. Let him chew injun rubbah a half 'ouah 'fo' eatin'.—Ex.

Park's History of Medicine, which we reviewed in the October number, may be obtained from the Helman-Taylor Co., Cleveland.

Tethered Truants, reviewed in the August number, may be had postpaid, by sending \$1.10 to Dr. W. C. Cooper, Cleves, O.

The Passing of Keeley. According to the *Lancet (Alkaloidal Clinic)*, during 1896 22 Keeley gold-cures suspended and dissolved; 27 gold-cure homes, where specific treatment for alcohol and opium was given, went out of business. Five new companies were formed to sell rights to use secret inebriate cures. Three ex-superintendents of gold-cure establishments committed suicide.

To this may be added that in three years we have made notes of the relapse of 19 physicians who have been medi-

cal directors of gold-cure establishments. Ten of these persons came for treatment in regular asylums, where no specifics were used.

Work on the new Children's Hospital is again progressing after a delay of a month for want of iron. The walls of the first story are now up. The contractors expect to have this building completed by March 1st, but we should not be surprised if April 1st or a later date arrives before it is ready for occupation.

In the death of Dr. Louis G. Meyer, on October 29th, Cleveland lost one of her oldest physicians and one of the most esteemed, especially among the German population, the doctor being himself a German and educated at Göttingen and Berlin. He was attracted to California by the gold fever, but returned to Ohio on the breaking out of the war, and was appointed Surgeon to the Twenty-Fifth Ohio Volunteer Infantry, in which position he served through the war.

He then practiced in Cleveland until near his seventieth year, and was seventy-three at the time of his death. Dr. Meyer remained a bachelor. His elder brother, Dr. William Meyer, survives him, as do also many relatives, his nephews and nieces, among whom are William V. Meyer, of the drug firm of Meyer and Gleim; Louis G. Meyer, D. D. S., and Albert F. Meyer, M. D.

Dr. M. Coplan left for New York November 1st, where he is devoting his time to special courses in Medicine and Surgery.

Dr. Charles H. Stowell, well known as a medical journalist and author, for some time past editor of both *The National Medical Review*, published in Washington, and *Practical Medicine*, published in New York, has severed his connection with the former journal. He has given up active practice and removed his residence from Washington to Lowell, Mass., where he will devote himself to the editorial management of *Practical Medicine* and to other literary work. While occupying the chair of histology and microscopy in the University of Michigan, where he was instructor, lecturer and professor from 1877 to 1889, Dr. Stowell began the publication of *The Microscope*, and also published a number of books, one of which, on the histology of the tooth, was especially well received and took a leading place in the literature of that

subject. Aside from writings of a more permanent value, Dr. Stowell's comments on current events of medical interest are among the brightest and most readable things to be found in medical journalism, and we hope that his trenchant remarks, usually heretofore finding place in the *National Review*, will not fail of a suitable setting under the changed conditions.

The Microscope was established in 1881 by Dr. Stowell and his wife, Mrs. Louisa Reed Stowell, then Assistant in Microscopical Botany in the university. In those early days *The Microscope* was contesting the field of microscopical journalism with *The American Monthly Microscopical Journal*, which had been started a year before *The Microscope* by Romyn Hitchcock, and a number of vigorous journalistic tilts were engaged in between the two. The present relation between the two journals is in anticipation of the truth of revelation that "the lion and the lamb shall lie down together" (not to specify which is the lion and which the lamb), as, after a number of changes of habitation and editorial control, both have found apparently permanent lodgment in Washington, and are in the hands of one man, Mr. Charles W. Smiley, under whose able management they have filled the separate fields assigned to them, *The Microscope* being designed especially for beginners and to popularize the subject of microscopy, while the other is devoted to more advanced matters. Both journals are well known in Cleveland. The early volumes of *The Microscope* contain frequent contributions from the late Dr. Allen Y. Moore, one of them the description of his process of double-staining nucleated red blood-cells, which was first done by him and aroused much interest among microscopists by the beautiful results attained. Mr. L. A. Willson has also long been a regular contributor to *The Microscope*, and Mr. C. M. Vorce's writings have found frequent place in the *Journal*.

The National Medical Review was first published by Dr. Stowell under the name of *The Capitol Review*, but with its change in name it still retained its characteristic cover design, consisting of a view of the Capitol at Washington. Its publication and editorial supervision have been undertaken by Dr. Thomas E. McArdle and Dr. George W. Johnston.

Dr. David R. Jennings one of the best known of Cleveland's dentists, shot himself with a revolver, it is sup-

posed accidentally, on the morning of October 28th, and died early the following morning without regaining consciousness. Dr. Jennings was born in Portage County, where his parents were among the pioneers, and he took pleasure in recounting tales of his boyhood days in the Forties, when the judges, lawyers and officials who followed the court circuit, including Judges Pease and Burchard, Wade, Giddings and others, made it a point to partake of Mrs. Jennings's hospitality on Sundays, during the terms when court was in session at Ravenna. He began his dental practice in Ravenna, coming to Cleveland in 1872. His work showed a wonderfully perfect command of the technique of dental operations. He was given the honorary degree of M. D. by the Medical Department of the University of Wooster, in 1887. He was widely known in his profession and was president of the State Dental Society in 1877, and was for several years in the faculty of the Dental Department of Western Reserve University. For the past few years he had been in poor health and on several occasions had been compelled to give up practice for considerable intervals.

The Reason. *Maxencet*—Why is it that when a doctor is ill he always calls in another doctor?

Pillsbury—Suicide is so cowardly, you know. He prefers to let the other fellow do the job honorably.—*Town Topics*.

School Inspection in New York City. Dr. Hermann M. Biggs in an address before the British Medical Association at Montreal, alluded among other topics to the work of the 150 school inspectors who were appointed early in 1897. During three months, or sixty-five school days, there were examined 63,812 children, and of these 4,183 were excluded from the schools. The diseases found were measles, diphtheria, scarlet fever, croup, whooping cough, mumps, contagious eye diseases, parasitic diseases of the head and body, chicken pox and skin diseases. Inspection of the schools has proven a most valuable means of preventing the spread of contagious and infectious maladies and a similar system should be adopted in Cleveland.

Opium in the Diarrheas of Young Children. The indications and the equally important contraindications are thus presented by Dr. Floyd M. Crandall in the *Archives of Pediatrics*:

"It is contraindicated, (1) In the first stages of acute diarrhea, before the intestinal canal has been freed from decomposing matter; (2) when the passages are infrequent and of bad odor; (3) when there is high temperature, or cerebral symptoms are present; (4) when its use is followed by elevation of temperature, or the passages become more offensive — symptoms which indicate toxic infection from putrefying contents.

"It is indicated, (1) When the passages are frequent, with pain; (2) when the passages are large and watery; (3) in dysenteric diarrhea, together with castor oil or a saline; (4) in late stages, with small, frequent, nagging passages; (5) when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach."

A Doctor's Patent. Although a physician cannot under the code take out a patent for any instrument, medicine, or appliance used for the sick, there is nothing to hinder him from protecting and profiting by any other inventions he may make. A few have found invention profitable, and more deserve to. Dr. J. A. Harvey, of Newport, R. I., has taken out a patent on a locomotive cab-seat, so arranged that jolting and swaying is obviated. The doctor had observed the frequency with which engineers are obliged to consult physicians for the effects of the jarring and swinging motions which they endure while the locomotive is running, and this led him to the invention.

A New Journal of Physiology. The American Physiological Society has projected a journal to meet the needs of investigators and writers upon physiology, physiological pharmacology and chemistry, and allied branches. It will be an annual of about 500 pages, issued in parts or numbers whenever material is at hand. The first number will appear in January, 1898. *The American Journal of Physiology* will be edited by H. P. Bowditch, of Boston; R. H. Chittenden, Ph. D., of New Haven; W. H. Howell, M. D., of Baltimore; Frederic S. Lee, Ph. D., of New York; Jacques Loeb, M. D., of Chicago; W. P. Lombard, M. D., of Ann Arbor; and W. T. Porter, M. D., of Boston.

A journal of this class, while it will be of great use to scientific workers, can hardly be self-supporting, and aid in the form of subscriptions is asked of all lovers of learning. The price per volume is \$5 (£1 1s.; marks, 21; francs, 26), and should be sent to Dr. W. T. Porter, 688 Boylston street, Boston, Mass.

Massage as an Occupation for the Blind. In a paper read before the Erie County Medical Society (New York), Dr. Arthur G. Bennett presented many arguments showing why the blind should be able to make successful masseurs. First he spoke of their well-known delicacy of touch. Another point was that their blindness would relieve the patient of embarrassment about exposing the body, which to many is a real trial, especially to some who have deformities or blemishes about which they are extremely sensitive. Inasmuch as it appears that of the 4,000 blind persons in the State of New York only 6 to 10 per cent. are able to support themselves, it is very desirable that suitable employment be found. Dr. Bennett's suggestion seems very sensible, though the number of masseurs who can find employment in any community will not be very large.

Physicians as Members of Legislature. In reading biographies of American physicians, both in city and country, one has been struck with the large number whose ambition was gratified by a term or two at the state capital as representative or state senator. A very interesting article could be written on the services of medical men as legislators. As a rule the doctor has proven himself well acquainted with the needs of the people and a good law-maker. In Germany the doctor has been very much in evidence in government circles; while in Great Britain his influence has not made itself felt as much as it should. An Italian journal recently gave the names of twenty-three physicians who are members of the legislature. Three of these are alienists of considerable note and six are professors in medical colleges. Only four of the twenty-three are retired physicians.

Dr. Percy T. Phillips, formerly of Reno, Nevada, and ex-president of the Nevada State Medical Society, has returned to Ohio and located at Bellevue. He reports Nevada as a first-rate place for a doctor to do business in, but for a place to live he prefers the old Buckeye State.

Dr. C. A. Bolich expects to go to the Klondike in the spring. He will join an organized expedition. So far he is the only Cleveland doctor to make the venture, though a number in other places announce an intention of going. Most of the young men claim they can't afford so long a trip. In these dull times for doctors, by the time one has secured enough to pay his way he is too old to go anywhere.

We Have One Subscriber who subscribed upon the condition that the GAZETTE should occasionally contain "some good receipts." Therefore we append some recipes—not that we know them to be better than any other, but we have seen these going around in all the journals, and they are very likely good, at any rate they will serve to keep our contract and help fill up. After all, for those who depend upon ready-made formulas one "receipt" is about as good as another.

Ointment for Rheumatic Joints.

R—Salicylic acid.

Oil of turpentine.

Lanolin āā ʒiiss.

Lard ʒiij.—M.

—*Jour. des praticiens.*

Bromoform in Phthysical Coughs.

R—Bromoform 30 drops.

Alcohol 10 gme.

Syr. ipecac comp. 100 gme.

Syr. opium 100 gme.

Syr. cherry laurel 100 gme.

Mix (in the order named in order to get a clear mixture).

S.—Take 3 or 4 tablespoonfuls daily between meals.

For Epilepsy.

R—Antipyrin 1 dr.

Ammonium bromid 3½ dr.

Strontium bromid 1 dr.

Solution of potassium arsenite . . . 40 minims.

Extract of solanum caroliniense . . 10½ dr.

Water, to make 6 fl. ounces.

Mix.

Dose: A dessertspoonful or more twice daily.

Urticaria.

R—Carbolic acid,

Ess. peppermint āā grs. xv.

Oxid zinc.

Lanolin āā dr. v.

Pure vaselin oz. ij.

Sig.—Apply locally.—*Brocq.*

Ointment for Acne. The following is said to be used by von Hebra and Ullman, and to be efficacious when applied in the evening to the largest pustules of acne:

R—Bismuth subnit.

White precipitate

Ichthyol 125 grammes.

Vaselin 20 "

Mix.

Apply as directed.

Cleaning Rusty Instruments. Brodie gives the following as an effective method of cleaning rusty instruments (*Jour. Brit. Dent. Assoc.*): "Fill a suitable vessel with saturated solution of stannous chlorid (clorid tin) in distilled water. Immerse the rusty instruments and let them remain over night. Rub dry with chamois after rinsing in running water, and they will be of a bright silvery whiteness."—*Clinique*.

A Gunshot Wound in 1829. Dr. F. E. Weeks, of Clarksville, contributes the following, which lately appeared in the *Firelands Pioneer* :

"Dr. Moses C. Sanders, father of Dr. John C. Sanders, of Cleveland, settled in Peru Township, Huron County, in 1818. He has taken his saddle-bags on his arm and walked to Fitchville (twelve miles), having nothing to guide him but marked trees; and after visiting several patients, returned the same day. It was common for him to ford streams that would often oblige his horse to swim across.

"On the 24th of July, 1829, Amos Rathbone, of Rugles, accidentally shot himself in the neck, a rifle ball passing around and very close to the jugular vein. He walked about a mile to the house of his brother, and Mr. Rathbone poulticed the wound. His friends concluded the wound was slight and at first decided not to send for a physician, but fearing that the concussion might have affected his head, finally sent for Dr. Sampson to bleed him. The doctor removed the poultice and brought the edges of the wound together with adhesive plaster. Much pain ensued, and Dr. Sanders was called. A bread and milk poultice was prescribed and the man recovered. The nature of the wound and the merit of cure became the subject of newspaper discussion, and many columns of the *Norwalk Reporter* were occupied by the ardent disputants in the attempt to demolish each other. Dr. Sanders claimed that to the 'good woman of the house' who applied the poultice belonged the credit of cure, and as but little was heard of Dr. Sampson afterward, it is supposed the community was of the same opinion."

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Original Articles.

INFANTILE SPINAL PARALYSIS.*

BY STEWART LEROY McCURDY, A. M., M. D.,
PITTSBURG, PA.

Member American Orthopedic Association; Orthopedic Surgeon to Presbyterian Hospital; Professor Anatomy and Oral Surgery, Pittsburg Dental College; Dean Pittsburg School of Anatomy,
Member American Medical Association, etc.

This condition has also been described under the heads of anterior poliomyelitis, teething palsy, etc. It is characterized by a sudden development of paralysis of muscles, or groups of muscles, of one or all extremities, following an acute febrile attack, frequently accompanied by convulsions, and followed by deformity.

The *causes* have been enumerated as exposure to cold and sudden changes of temperature, sitting on the ground or stone steps, exposure to the heat of the sun, falls, etc., but in the majority of cases no cause can be found. Epidemics of anterior poliomyelitis, as reported by Caverly, Cordier, Rissler, and Medin, tend to show that it is an acute infection, due to some variety of bacteria.

Caverly reports an epidemic occurring near Rutland, Vt., in 1894, in which there were 132 cases. Males were more frequently attacked. It was not contagious, as it was rare to have more than one case in a family. Con-

*Advance chapter from Dr. McCurdy's Manual of Orthopedic Surgery.

vulsions occurred in 12 cases. Paralysis followed in 119 cases, but in 56 cases they completely recovered. Eight deaths resulted. In the epidemic reported by Cordier, of Lyons, France, there were 13 cases, of which four resulted in death.

The *pathological* changes found are a destructive inflammation of the multipolar cells of the anterior horns of the spinal cord. It may be confined to the cervical or lumbar enlargement, and in cases where the lower extremities alone are paralyzed the lesion is found in the lumbar enlargement. The muscles involved are always atrophied. The atrophy may be quite extensive, and where an entire extremity is included there will also be found extensive degeneration of the entire extremity, including the bone, and measurements will show that the leg is not so long as its healthy fellow.

The disease is divided into three stages: First, acute or initiatory, during which time the patient suffers with high temperature, possibly convulsions coming on during the night, which last for a day or so; second, stage of paralysis, immediately following the acute attack, during which time the paralysis is greatest. There is also some improvement during this stage, and certain muscles may completely recover their power. It extends over a period of from a few days to many months. The third stage is known as the stage of retrogression, during which time some of the muscles regain some of their power, and others are found completely paralyzed and remain permanently so. It is during this stage that the deformity begins and, without preventive treatment, grows progressively worse. The muscles and the bones become atrophied. This stage includes the rest of the patient's life. The extent of paralysis is not uniform, because it may involve from a portion of a muscle to the muscles of all the extremities and trunk. Usually, single muscles or groups are paralyzed, as the flexors, extensors, or adductors to an extremity.

Deformities which follow infantile spinal paralysis vary from the slightest muscular defect to a condition of

complete helplessness, and increase throughout the career of the patient so long as he goes without treatment.

In the upper extremity the atrophy of muscles makes the arm useless, and the group of muscles unaffected draws the member into a deformity. The shoulder is flat. When the trunk muscles are involved we have lateral curvature, lordosis, and kyphosis.

In the lower extremity the most frequent deformity is some variety of club-foot. When the anterior group is paralyzed there is talipes equinus, or if the posterior superficial calf muscles are involved we have calcaneus. If the deep calf muscles are involved we have valgus, or if both calf groups are included there will be calcaneo-valgus. If the peroneal group alone is paralyzed there will be varus, and if this group is included with paralysis of the foot flexors equino-varus will result. Subluxation of the knee is a common deformity, due to paralysis of the anterior thigh group. This deformity may be associated with any of the foregoing varieties of club-foot. The paralysis may involve any of the groups of hip muscles, resulting in flexion upon the pelvis, adduction, abduction, or rotation. Any of the varieties of dislocation may occur in the hip.

It must be remembered in considering the anatomical condition of these joints in paralysis that it is not the ligaments which hold the heads of bones together in normal joints, but the muscles which cross over and control the action of the joint. This being the case, when the muscles crossing a joint are paralyzed a dislocation is easily produced by slight traumatism, and may be produced spontaneously.

A *diagnosis* is not usually difficult when deformity exists, but is not so easy in the first and second stages. Electric reaction of the muscles is always present so long as muscular fibre remains, and is only absent when the normal muscle cells are entirely destroyed. Sensation is not disturbed. The paralyzed extremity is always cold and clammy, pale and lifeless.

A *differential diagnosis* must be made from cerebral

palsies, progressive muscular atrophy, diphtheritic paralysis, pseudo-hypertrophic spinal paralysis, and acute myelitis. It may also be confounded with hip-joint disease, lateral curvature or other spinal disease, and rickets.

Prognosis. The prognosis is more favorable than in cerebral palsies. It does not tend to shorten life, but the deformities above described will follow, however, if preventive appliances are not constantly worn, in those cases where the tendency to deformity manifests itself. Paralysis does not increase after the acute attack, but instead, in the majority of cases, it improves.

Under proper treatment promises of improvement can be made, if the measures adopted are persistently and patiently carried out for months or possibly years.

Treatment may be summarized as follows:

Preventives of deformity.	{	Medicine.
		Electricity.
		Gymnastics.
		Massage.
		Braces.
Correctives.	{	Mechanical screw, spring, or other brace.
	{	Operative.
		{ Brisement forcé.
		{ Tenotomies and tenorrhaphy.
		{ Osteotomies.
Retentives.	{	Temporary.
		{ Braces.
		{ Plaster of Paris.
	{	Permanent.
		{ Ankylosis secured by operation (arthrodesis), or by injection.

Medical treatment must be directed to reconstruction of the nervous and general system. Strychnia, iron, and the hypophosphites serve best.

Gymnastics, massage, and manipulations should be constantly practised, but the first is the principal portion of the treatment. Gymnastics are (1) voluntary and (2) compulsory. By voluntary gymnastics we mean such exercise as the patient freely enters into for pastime, for enjoyment, or because he thinks it will benefit him; and by compulsory exercise, where the surgeon, nurse, or parent enters into exercise with the patient. The former

may be secured in playing games, riding the velocipede or bicycle, and compulsory exercise by force machinery.

Gradual and forcible correction of these deformities is done by machines, and Shaffer and Stillman have given us the best machine for the knee. To-day, however, tinkering with screw correctives is too slow, and when deformity is found it is corrected if possible at one operation. Operations as above tabulated consist of *brisement forcé*, with or without tenotomies and osteotomy, which may be from simple subcutaneous section to cuneiform operation. Karewski says two aims are to be sought for: First, to improve the joint without impairment of mobility and, second, to secure ankylosis.

The first is generally the aim in paralysis at the hip where the psoas and iliacus are not paralyzed and demand an artificial opponent.

Immediate correction of a joint in deformity may be done by cutting such contracted tissue as may be found to resist the correction, either subcutaneously or by the open method. Next break up adhesions in the joint and rupture contracted soft parts about the joint. In the hip the psoas and iliacus will be found shortened, and the joint may be in luxation.

Arthrodesis, or the obliteration of a joint to secure fixation, was introduced by Albert. It has been extensively practised by Karewski, Albert, Jones, Vance, and others. It is only to be used when all muscles of the extremity are paralyzed, and only then when the patient could better use the straight ankylosed joint than a flail joint. Robert Jones has operated on fifteen cases. He advises opening the joint, and with a scalpel or sharp gouge cutting the superficial area of cartilage off the whole articulation in the case of the ankle, and gouging the bone in case of the knee, keeping the joint completely at rest for some weeks subsequently, and for a long time having an apparatus worn which prevents a strain upon the newly made tissue.

The knee may be opened by the Ollier incision, the ankle by a transverse incision and entering the joint ex-

ternal to the flexor tendons, which are held inside. In the elbow, Kocher's incision is best, since it permits a removal of the capsule, which should always be incised.

The writer has injected pure carbolic acid into paralytic joints with the object of inducing ankylosis by a simpler method than opening the joint. (Such treatment is now being carried out, but sufficient time has not elapsed to determine its value as a substitute for the open operation in inducing ankylosis in flail joints.)

Summary of treatment may be made from the foregoing as follows:

1. If seen early, develop the muscles by gymnastics and electricity, and prevent deformity by braces.
2. If deformity is found, correct it with *brisement force* or osteotomies.
3. When muscular power is completely destroyed, and an effort to develop it has failed, ankylosis should be induced, either by injection of caustic liquids into the joint to promote adhesions, or by operation.

CASE I. M. C., aged 17. When two years old he had an attack of anterior poliomyelitis with sudden onset, high fever, convulsions, etc., after which he was completely paralyzed, *i.e.*, paralyzed of both upper and lower extremities. This paralysis was continuous until he was about four years of age, when he began to have some use of his arms and legs. The right arm gained more rapidly than the left, and the left arm more rapidly than the lower extremities. When treatment was begun, 14 years after the onset, he was crawling around on his hunkers, as he had been for all these years, except during the last two or three, when he had been riding a tricycle. As shown in Plate I., Fig. 1, he had an exaggerated talipes equinovarus of the right foot, which could not be corrected by manipulation, and a subluxation of the left knee at an angle of 45 degrees.

Owing to the fact that the deformities had existed for so many years, the bones were held in their abnormal position by dense adhesions. The rule to which prominence has been given by Phelps, *viz.*, cut every tissue that

PLATE I.

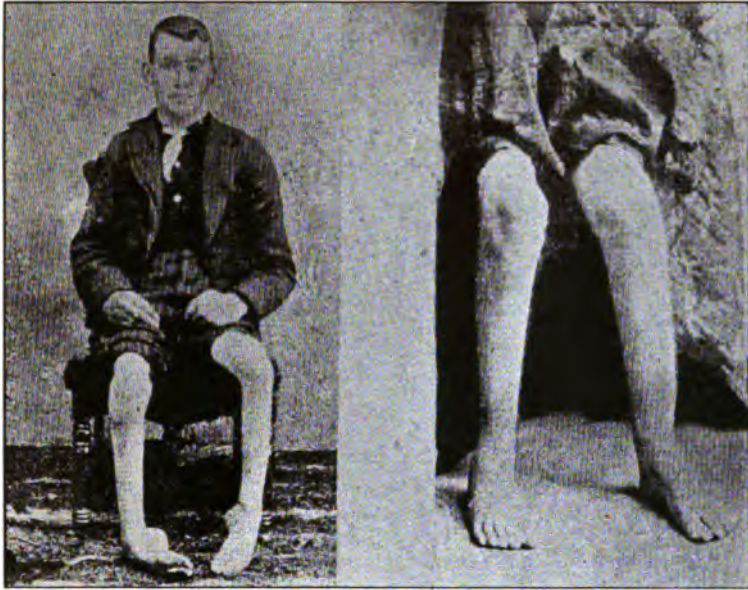


FIG. 1.

FIG. 2

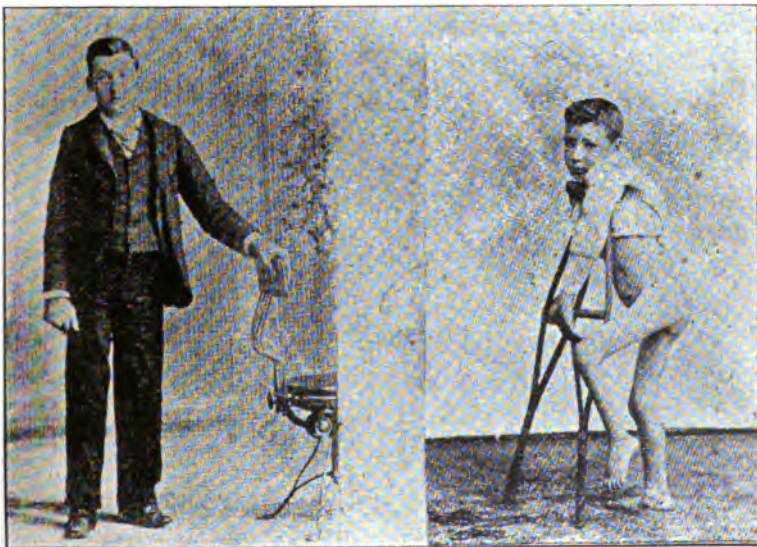


FIG. 3.

FIG. 4.



offers resistance, beginning with that which offers the greatest resistance, and continue to cut until the foot can be returned to a super-corrected, or at least corrected position, was observed as nearly as possible. Under A. C. E., the tendo Achillis was first tenotomized, the plantar fascia next; and, finally, the deltoid ligament had to be completely severed before the foot could be approximated to the normal. The Thomas wrench, or twister, was used to break up adhesions and rupture the shortened ligaments about the tarsal bones. Great force had to be used with the twister to do this. The tenotomies were of course done subcutaneously. In dividing the deltoid ligament, an artery, possibly a continuation of the posterior tibial, or at least a considerable branch, was cut, but as the cutaneous puncture was about an inch from the point of injury to the artery, pressure soon controlled the hemorrhage. The astragalus, which had been of course dislocated during all these years, could not be reduced, *i.e.*, could not be pushed back between the tibia and os calcis.

The foot was brought as nearly to a normal position as possible, but was not super-corrected by any means, and was put up in plaster of Paris. The skin punctures were dressed with gauze and protective. The plaster of Paris dressing was renewed once a week, and the foot held to an extreme point of correction until the plaster was hard. After each adjustment of the plaster the patient suffered great pain in the joint in the region of the astragalus for an hour or so, but he invariably noticed "something slip," and the pain was relieved. As this slipping occurred after every dressing, it was evident to my mind that the astragalus was wedging itself back between the tibia and the os calcis, and the forcible correction maintained thus by the plaster caused the soft structures to yield. The success we had in effecting a reduction of the astragalus can be determined by examining Fig. 2 of the plate.

The subluxation of the left knee-joint required tenotomy of the hamstrings and forcible breaking up of ad-

hesions between the bones and about the joint. It was impossible completely to correct the deformity here as in the case of the foot, *i.e.*, a parallelism could be had between the thigh and leg, but the leg was upon a lower plane than the thigh. This was due to the fact that the head of the tibia did not slip down and forward upon the condyles, and the relationship of these bones was not disturbed. The condition that existed is shown in Fig. 1, *a* representing the condition before correction was tried, and *b* and *c* the condition as the bones were brought parallel, which, as may be observed, increases the pressure

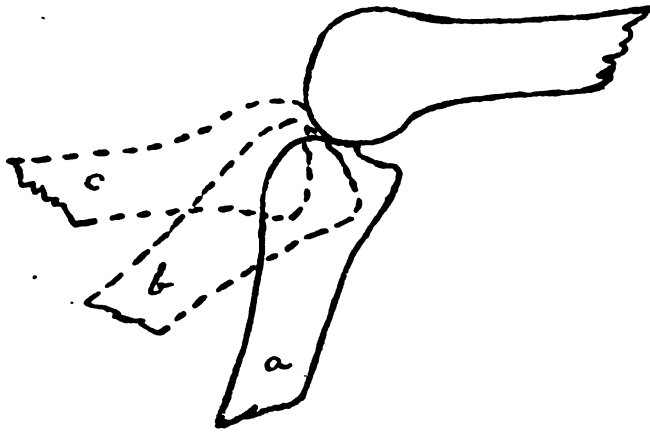


FIG. 1.

of the anterior surface of the tibia against the condyle of the femur, and thus prevents the head of the tibia from gliding forward over the condyles of the femur.

Immediate reduction of subluxation of the knee-joint is prevented: 1st, by the adherent patella and synovial membrane to the condyles; 2nd, by the impinging of the anterior portion of the head of the tibia against the condyles. In cases where the hamstrings are not cut, this burrowing in of the bones upon each other is much greater, and an immediate reduction is less likely to be effected.

Gradual and continuous leverage offered the best means for correcting the deformity mechanically. After the severe manipulation and tenotomies, the joint was put

up in plaster of Paris and kept there for about three weeks, or until all inflammation had subsided. Very little progress had been made toward restoring the normal relations of the joint. A perfectly plane splint was used, to which the leg was bandaged, and the knee was drawn down as close to the splint as possible, or as tolerated by the patient. This was tightened about every other day, or as often as was necessary to keep the bandage tight. Here, as after forcible correction of the talipes, the patient experienced a slipping or letting loose in the joint, and the pain caused by the forcible correction was relieved thereafter.

The success we had in the treatment is shown by comparing Fig. 1 with Figs. 2 and 3 of the Plate, taken six months apart.

CASE II. Samuel M., aged 17. Had an attack of anterior poliomyelitis at four years of age, resulting in

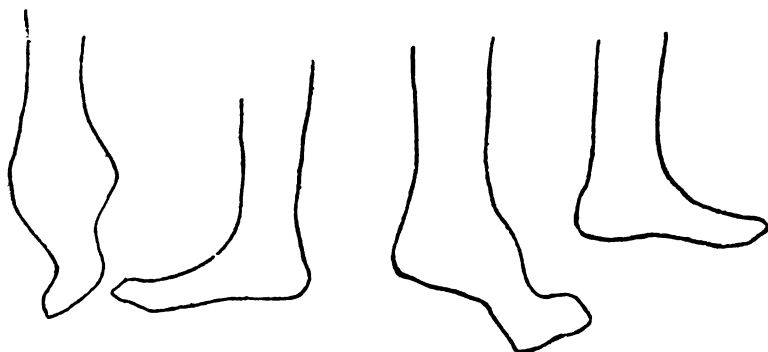


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

talipes equinus in both feet, the right foot being worse than the left. (See Figs. 2 and 4.)

Operation consisted of tenotomy of the tendo Achillis and the plantar fascia of each foot, and forcible breaking up of adhesions about the tarsal bones with a Thomas wrench. The feet were put up in plaster of Paris, and new dressings re-applied once a week for four weeks, when the patient was able to walk home on crutches. Fig. 2 shows the right foot before, and Fig. 4 after treatment, and Fig. 3 shows the left foot before, and Fig. 5

after treatment. The patient always used crutches before treatment, but has no need of them since. Recovery is practically perfect.

CASE III. Clarence G., aged nine. While 11 months old he had fever and severe convulsions. While yet in his mother's arms she noticed that he was completely paralyzed on his left side. He had been able to walk before the attack of anterior poliomyelitis, but it was about one year afterward when he again began to creep, and he did not get upon crutches until three years later, or when about five years old. For the succeeding four years he walked on crutches. (See Plate, Fig. 4.) Operation con-



FIG. 6.

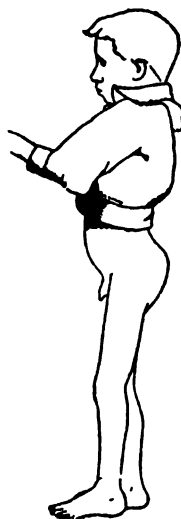


FIG. 7.

sisted in tenotomies of tensor vaginæ femoris, fascia, etc., to liberate the thigh at the hip-joint, and of the hamstrings to correct the subluxation and flexion at the knee. The tenotomies were done subcutaneously. The patient was put up in plaster of Paris from the thorax to the heel, and allowed to remain so for about two weeks.

In order to make the plaster dressing lighter and less likely to break over the hip and under the knee, pieces of iron were put in over these joints, as is the practice in

the New York Institute for Ruptured and Crippled. (The case is shown in Figs. 6 and 7.)

As a retaining splint, after the first few weeks he wore a Thomas hip splint, with an outside piece riveted to rings at thigh and calf, and fastened to the foot at the heel. It was also necessary to use an abduction arm, owing to the great tendency to that deformity. The patient now has entire control of the hip. The brace was cut off at the upper end of the double bars, or at thigh ring, which removed all support to the hip joint, and the lower or knee portion was used. He is now able to walk without crutch or cane.

THE RELATION OF CRIMINALITY TO MENTAL DEFECT.*

BY ALONZO B. RICHARDSON, M. D.,

Clinical Lecturer on Insanity, Starling Medical College, Columbus;
Superintendent of the Columbus State Hospital
for the Insane.

The scope of the title to this paper is so comprehensive, and the subject it suggests is so vast and so vital to the future development of mankind, that one may well hesitate to attempt its discussion. I confess that I undertake it with much trepidation and with a consciousness of the insufficiency of all human effort to solve the problems it propounds. However, it is a subject well worthy of our best thought, and the world and our fellow men are entitled to whatever of value such discussions may disclose. Our aim in them should be twofold—to improve and elevate the human race, and to contribute to the enlightened administration of justice in the necessary relations of man to man.

To have a clear conception of the subject and of the relation of its parts, it will be necessary to attempt a definition of the principal terms. What do we mean by mental defect, and what do we mean by criminal? What

* Read before the Medico-Legal Section of the C. C. M. S., Cleveland.

is crime and what constitutes criminality? On a just comprehension of the meaning of these terms much depends in our efforts to outline and define this relationship. Mental defect should be understood as applying to a class of persons distinctly separated by their condition from the ordinary, independent, self-supporting citizen of the state. It does not mean simply a less degree of intelligence than that possessed by some other individual; it does not mean peculiarity, where this peculiarity is not of such degree or of such character as seriously to impair the well-being of the possessor; it does not mean idiosyncrasy or eccentricity, providing this is of such nature as not to jeopardize the capacity of the person to maintain himself in peace and comfort and without prejudice to his neighbor. He may not do what he does just as some other person would do it, he may not reach his ends so expeditiously, and his processes of reasoning may not be so clear; he may be more ungainly, and less skillful in workmanship, but if he is able to maintain himself and those dependent on him in reasonable comfort, and so to conduct himself as to protect and foster the rights of his fellow men, if he has a reasonable regard for his duties as a citizen and discharges them with ordinary capability, we have no right to consider him mentally defective.

Defect means the existence of something interdicting the performance of the usual functions of a human being in an ordinary degree of efficiency; and mental defect means a condition of the mind arising from disease or imperfect development of the brain, in which it is incapable of performing its usual and necessary functions in such a degree of efficiency as is required for the safety and maintenance of the individual and the protection and well-being of the social organism. It is a deficiency in the structure of the brain, either from acquired disease or imperfect development, inducing such impairment of the mind as must inevitably push him to the wall in the struggle for existence, either through his incapacity to do the things necessary for his own well-being, or through his inability to reason safely as to the rights of others

and his own responsibilities as a unit in the social organization. It must be a visible defect, that is, a defect so decided as to stand out clearly in contrast with the usual mental state of ordinary humanity, readily noticeable to the average intelligence and exhibited in the discharge of the usual functions of a citizen. So, on the other hand, a criminal is not every one who does an act he knows to be wrong; it is not even every one who may do an act which violates the laws of man. He may do the act thoughtlessly or inadvertently; he may be in ignorance of its criminal character, or ignorant of the law it violates; the law itself may be prejudicial to society, and in its violation he may more nearly conserve the welfare of the social fabric than in its observance.

The real criminal is that human unit in the sum total of the social structure that deliberately and wilfully does an act, for a purpose, the act and purpose being in contravention to society's safety and well-being, and interdicted by the laws found necessary for the protection of mankind. The malevolent, evil-wishing mind, or at least the mind that overrides the rights of others in the attempt to attain the thing desired for itself, is the essence of the criminal character. Crime is simply the sum total of the conduct of the criminal, as such, and criminality is simply that tendency in man that inclines, or induces, or impels him to criminal acts. It is in reality a state foreign to man as an integral part of the social fabric. We are taught in Holy Writ that "Man is born to evil as the sparks fly upward," but I cannot concede to this the old interpretation of natural sin. If this be so, how can we hope for the ultimate redemption of the race. God has given man a nature, He has so constituted his mind and body that he has within himself all the elements essential to its final evolution. There is something in man that tends to lift him to a higher degree of efficiency, to enlarge the scope of his activity, to extend the field of his useful energizing. How can this be done if the natural bent of man is toward criminality? No, all crime is alien and unnatural. It is the relic of savagery

and immature development. It is the result of fallacious or immature processes of reasoning, and as such can never be said to be man's natural state. Else how would man have arisen from a state of savagery and unreason to the perfections of equity that we see in the rules that to-day regulate the social organization. Crime is at war with man's best interests as well as those of society, and it cannot be his natural state. In this respect it does not differ from mental defect. They are both unnatural states. They both antagonize the development of man and the evolution of society. They are both inimical to the growth of the human unit to the broader, higher, and more complete effectiveness toward which it is most certainly tending. But although they agree in this respect, criminality and mental defect differ widely in their nature otherwise. They both relate to conduct, it is true, and to conduct that is hostile to the welfare of the race. They both have a moral aspect. Conduct is made up of specific acts. In criminality and mental deficiency these may be the same in their moral attributes. Much mental defect is largely restricted to acts of this character, and in this respect it often closely resembles the conduct of the criminal; but to constitute mental defect there must be something else than simply the unrighteousness of criminal acts. There must be the evidence of defective reason and judgment, the absence of natural criminal motive, and the presence of other signs of disease or defective development. But we will refer to this aspect of the subject at greater length later.

Bear in mind now that we are not simply philosophising on an abstract question of ethics. We are comparing forms of activity and states of the human organism that actually exist. Criminality is to-day the most vital and the gravest subject that can engross our thought. It is for us to study and analyze it in its every aspect, to classify it if it admits of classification, and to search out, if possible, its stronghold and its points of vulnerability. Just as we combat disease, so must we root out the hostile elements of crime and the depreciating, the blighting in-

fluence of criminal conduct. As we look about us and compare the conduct of the separate units of mankind, we are struck with the great contrast and the marvelous variety that exists in criminal character and conduct. In one instance it seems accidental, in another it is evidently the usual conduct of the individual. In one case it relates only to one class of acts, in another it would seem that every act of the person was the offspring of criminal motives. Criminality has an individuality as complex and as far-reaching as that of humanity itself. Let us consider first the criminal by accident. The accident is only the accident of environment and association, after all. It is not as a rule an accident in the sense of a sudden and radical departure from previous habits of thought.

Take the ordinary instance of the violation of the national banking law. The offender is usually a person who has possessed in a more than ordinary degree the confidence of his fellow-man. He is chosen to his office perhaps because of his supposed unimpeachable integrity and his spotless life. His environment has been more than usually fortunate. When the crime is made known it shocks the community by its supposed suddenness, when in truth the mind of the individual has been approaching it step by step for months and years. In the first place the mere handling of so much money tends to remove the idea of property right in it that keeps it sacred to the individual in the ordinary walks of life. Then the stress of necessity and the far-reaching results of impaired confidence, becoming familiar to him by oft-repeated presence in his mind, tend still further to sear over the sensitive surface of his conscience. The deception, too, works no one a harm in the first instance of its adoption, and is practised with the expectation and confidence in the individual of a speedy and certain remedying of the condition that is thus concealed.

But an unexpected hitch occurs, the remedy is not at hand as promptly as expected. A little delay will not matter, however, and so it continues. By and by a sharp

crash comes, and he is brought face to face with the alternative of business failure and disgrace, or a further plunge into a moral abyss from which there is no escape. With his mind gradually prepared and ripened for the result, perhaps even without his consciousness of the extent to which he has already gone, the choice is made, the die is cast, and the criminal is at last come to full maturity. The repeated contact with certain forms of crime breeds a familiarity with its features and lessens its repulsive appearance until it finally does not seem as criminal as it once appeared. With an education and an environment that have fully equipped the individual for intelligent judgment of the ethics of his acts, many a criminal is made such by just such processes, a gradual and, in part, unconscious change taking place in his reasoning and warping his sense of right. This influence is far-reaching, and we should not undervalue its importance. Education and environment are powerful factors in the control of man's social and personal activities. They lead him this way or that in the evolution of his ethical opinions, and within certain limits they may be said to determine whether his development shall tend toward the better or toward the worse.

But with all this influence they have a limit. There is a large class of criminals in whom crime seems to be a natural state. No education and no environment for these will altogether remove the tendency to criminal conduct. In spite of circumstances that ordinarily are effective in guarding the individual from unlawful acts, and in the face of influences that usually prove sufficient to maintain in him a controlling regard for the right of others, he repeatedly and inevitably returns to crime and criminal associations as soon as the opportunity presents. Punishment has a less deterrent effect on him than on the class we have just described, and much less than on ordinary humanity. The moral side of his mental functioning is not so sensitive to the usual stimuli. It is lethargic, or dull, or callous, and the individual is minus that delicate and acutely sensitive regard for the rights of others

that controls the acts of ordinary mortals. He admits a knowledge of his responsibilities as a citizen, he readily concedes that his former acts have been at war with the rights of society, and concedes the justice of the penalty that may have been inflicted; he may even promise that he will never repeat such acts, but his subsequent conduct soon demonstrates that he failed to comprehend fully the ethical import of the words he repeated. The "rights of others" is to him a term with a different meaning than that given it by common humanity. His words are but empty and unmeaning phrases, and his acts disclose the criminal bent, the moral deficiency that is in his tissues and that courses along with every drop of his blood.

It is, in him, without doubt, a natural state, and so far as this is true it discloses in him a variance from that natural state in mankind in general which tends toward growth and evolution. It is retarding and retrogressive in tendency and must originate in conditions of structure that are prejudicial to the best interests of their possessor. These conditions of structure cannot but be regarded as defects in a theoretical, and even in a practical sense, for they impair the usefulness and jeopardize the safety of the individual. At the same time, although he is differently constituted from his fellow man, although his views of acts are ethically defective, there is in the large majority of such persons a wide limit of activity in which the individual has the power to do or not to do, to choose or to reject. He has not this power in all the perfection of the perfectly normal individual, it is true, but he does possess it, and he is influenced by ordinary motives to a certain degree. He is also in every other respect without appreciable defect. His bodily structure and physical functions show no imperfections. He is in every respect like his fellow men, except that there is a natural tendency in him to choose the wrong rather than the right. Now such a type, which is, as I view it, that of the ordinary habitual criminal, should not be considered to indicate mental defect in the sense that I have already defined it. The structural deficiency is not apparent, the

processes of reasoning are not unnatural, there is nothing abnormal in the method of execution of acts, criminal or otherwise, and the mere possession of tendencies of a certain character, predispositions to certain lines of conduct, cannot be considered sufficient evidence of the existence of disease or defective development. In every view of the subject, both for the interests of society and for the best good of the individual, we are justified in holding him to a strict accountability. The range of his potentiality is so wide, his power to do or not to do is so certain, that no other than the natural and normal degree of accountability should be exacted of him. The practical decrees of society in regulating the correction of its individual units are necessarily coarse and only approximately exact. They cannot take cognizance of the many little refinements and variations in their structure and functional tendencies. We are all different, one from another, and these are only a little more at variance with the average than the rest of us. While in a certain sense, and in a degree, unnatural, they are so nearly natural as to be judged by the usual standards of morals. We cannot excuse their criminal tendencies, or condone the acts of crime they commit.

Again, there is a class of persons in whom crime seems a natural state, who show, in addition to the tendency toward criminal conduct, other abnormalities in physical or mental characteristics or in both. They may be intellectually dull, they may be easily provoked to outbursts of passion, excitable, irritable, emotional and extravagant in conduct. They may be victims of strong impulses and habits that tend to destroy them in both body and mind. They may have structural peculiarities and visible physical deformities that show a certain degree of imperfect development or physical disease. They may have peculiarly shaped heads, defective conditions of the special senses, imperfectly developed mouths or teeth, misshapen ears, a want of symmetry between the two sides of the body. All these the individual may show and yet he may have a very fair appreciation of his duties as

a citizen and an ordinarily just view of the equity of his conduct and his relations to his fellows. The former class shades off into this by imperceptible gradations, and in many individual cases we must be often puzzled to know on which side of the dividing line they are to be placed. When the defect is more evident we incline to place them on one side, when it is less conspicuous we class them with the others, but in all we can but hold them to an accountability not different from that which is fixed for mankind in general. We do this because we find in them a fair appreciation of their acts from an ethical standpoint, an ordinary degree of self-control, and an intelligent comprehension of the consequences of their conduct. We may be inclined, in cases with the more pronounced evidences of physical and mental peculiarity to mitigate the penalty that is imposed, to attempt to grade the punishment to the degree of capacity of the individual, but we do not in any case concede irresponsibility, and the treatment they receive from their fellows is determined more by the desire to inflict a penalty for a voluntary wrong and to deter the individual from a repetition of the offense, than by the wish to protect society and the individual from a condition for which he is not responsible. We are not justified in relieving an individual of responsibility because he has a high-arched palate and stiff hairs, or because he is not intellectually the equal of the average person, or cannot so readily control his temper under provocation. Physical defects alone, no matter of what character or of what extent, cannot be an excuse for criminal conduct. There must be in addition the evidence of defective reasoning or mental perversion or disease. We may more readily anticipate the latter where we find physical deficiency or disease, but the mere occurrence of a criminal act in such a person should not be considered conclusive of the existence of a corresponding mental defect of which it is the result. Either the act itself must clearly disclose diseased mind or well marked defect in reasoning processes, or the other mental activities of the person must show mental defect or disorder, before we

can offer the defect of the individual as a palliation for his crime. As long as he exhibits no marked abnormality in his views of ethics, and mentally compares fairly with the ordinary individual, as long as he can realize and conduct himself in his other activities in accordance with the usually recognized rights of others, we cannot condone a criminal act simply because he is physically defective or peculiar, or mentally not altogether so perfect as others of his fellow men. This much is conceded and fairly clear to the mind trained to the study of acts from this standpoint. There may be in some cases an element of doubt, a question of full responsibility, and we may sometimes incline to plead for a mitigation of the penalty, when the criminal intent is overshadowed by the existence of evident idiosyncrasy or clearly marked peculiarity in mental processes. This class, as the last we considered, shades off into the next by imperceptible gradations, and it is only the necessities of the practical administration of justice that makes a dividing line where in nature none exists.

And this brings us to the consideration of the last division of our subject, namely, the fact that there does exist in our midst a class of persons in whom there is a natural tendency toward criminal conduct, in whom the tendency is clearly the result of physical and natural defect or disease, and in whom there is no power, within the individual himself, to prevent or protect him from the execution of these tendencies. We shall not stop to discuss the existence of such a class. We believe this is conceded by most thinking men. We shall only attempt to point out a few of the most prominent phenomena by which they may be recognized.

And just here I desire to say that every case is a study of an individual, and the individual is to be compared, first with himself, and secondly with the class to which he belongs and the environment out of which he grows and the education through which he reaches the point at which he is found. It would be manifestly improper to judge by the same rules of conduct the Russian

Pole and the educated, native-born American. We should not establish the same ethical standard for all classes of men. I am firmly of opinion that moral qualities are intimately blended with physical states, and that there is as much of an individuality in the one as in the other. The more enlightened the individual, the more fortunate his environment and his inheritance, the higher we should fix his ethical standard, and the more he has been hampered and stunted by these elements in his life, the more concession we should make to him for defective self-control or errors in ethical reasoning, and, on the other hand, we should not concede to the latter class the existence of defect from features of his acts, that would make it clearly evident in the former. If I should find in an educated, native-born American, whose history showed comparative intelligence and refinement, the characteristics and limitations of the unlearned Bohemian, I would consider it, in him, the evidence of disease, where in the latter it could only be a natural state, prevalent in the majority of his class.

The most clearly marked of this last class are those in whom the criminal act is the direct outgrowth of a delusive idea, as in the case of Mrs. Williams, of Columbus, O., who murdered her children through the belief that a life of disgrace and infamy awaited them otherwise. In her the processes of reasoning, out of which the act proceeded, were clearly irrational, and based upon delusions regarding the attitude of the community toward her children and herself, and their danger therefrom, and the defect in her processes of reasoning was still further exhibited in the justification she subsequently attempted for the act, and the absence of all natural remorse for a crime, the most heartrending and cold-blooded in its character, considered in itself, that can well be imagined.

Again, there is a class in whom the criminal conduct is clearly at variance with the former life of the individual, and occurs at an age and with such conditions of physical deterioration and with such other evidences of mental change, in limited intellectual capacity, as justify

us in attributing the criminal act to the change wrought in the individual by the disease. Whether or not the crime is to be excused shall be determined in part by the evidences of changes in the person, clearly the result of disease, and in part by the nature of the criminal act and whether it is a reasonable outgrowth of such deficiency or not. Often there is in such persons simply a degree of mental enfeeblement, a dulling of the perception, so that the individual is easily made the dupe of designing persons, or fails himself to see the criminal character of his act. Where such a change is clearly the result of disease, and the criminal conduct is distinctly at variance with the normal state of the individual and shows itself with the appearance of the evidences of disease, we are justified in offering these as a mitigation for the criminal act.

A third class in whom criminal conduct is clearly the result of defect are those who are mentally enfeebled from birth. They have a manifest deficiency in this respect and have always been considered weak and imperfect in mental development. They constitute a large proportion of this class of criminals. The more you study criminals and the more closely you come into contact with criminal conduct, the more impressed you will become with the evident mental deficiency that exists in a very considerable number among them. There are wide variations in the degree of this deficiency, and in many it is comparatively slight and not sufficient to excuse them from responsibility, but when the deficiency is plainly evident and when the criminal act is without reasonable or natural criminal motive, where it is based on plainly evident defect in reason and where there is in the person an undoubted absence of moral effectiveness, where he cannot justly appreciate the moral quality of his acts, we are justified in attributing the crime to the defect, and therefore relieving him from the results under the law.

The nature of the criminal act must also largely determine our opinion. In such persons it is likely to be without much method or premeditation, the evident result of impulse or unreasoning passion. It is usually a crime

against the person rather than against property, extreme in its brutality and atrocity and often the outgrowth of the coarse animal passions, such as lust and the desire for revenge for injustice, fancied or real, such revenge as is gratified only by the infliction of bodily injury and coarse mutilations of body or property. The very atrocity and fiendish character of the act and the unnecessary extent to which it is carried, unnecessary even from the standpoint from which the person reasoned, is enough to make us carefully consider the origin of the motives that evolved it. The great hotbed of crime to-day lies in this class of persons, and their proper treatment to avert the dangers from their presence among us is one of the greatest problems of the age.

The fourth and last class which we will consider is one that gives experts and attorneys more work than any of those we have thus far considered. They are not so numerous as the last class, but when they do appear they are much more puzzling, and the degree of their responsibility is much more difficult to determine. They are persons of fair physical development, without any physical defects of consequence, intellectually not enfeebled either congenitally or from acquired disease; indeed they are often more than ordinarily bright and quick to learn, picking up new things readily and trying their hand at almost anything that presents itself with surprising adaptability, but with it all manifesting almost a total absence of the capacity to judge of the moral quality of their acts. That there is such a class of persons I have no question. I have had a number of them under my care during the past 21 years. The most that I have had have been young men from 16 to 22 or 23 years of age. I have been in the habit of calling them moral imbeciles. They are usually persons of good or fair inheritance, with more than ordinarily favorable environment, but black sheep in their domestic and social circles. They are nearly always immoral, utterly untruthful, with no regard whatever for the rights of others as to property, but not usually given to crimes against the person. They will steal, forge

checks, commit burglary, indulge in all kinds of licentiousness, and do these crimes against the law without much regard to their own actual necessities. While intellectually bright, they are vacillating and unstable. They will not stick to any one employment for any length of time. They invariably start out well, but soon tire of routine and chafe under any restraint. In many it is very puzzling to determine correctly the degree of responsibility to which they should be held. They are plainly not constructed as others are, and are not amenable to normal motives in the usual degree. Yet they can often be controlled to a certain extent by properly directed motives and have a certain fear of the penalty of the law, and as far as they possess this they are certainly to be considered responsible. Probably as safe a rule to follow as can be suggested is to compare the motive for the criminal act with that which usually gives rise to similar acts in others. If this motive is manifestly abnormal and the act is wholly out of proportion to it, we may well question the responsibility of the individual, but if the act is done with a purpose that is reasonable from a criminal standpoint, if it is executed naturally and reasonably, and the person seems able to appreciate its criminal character and the consequences that will follow from detection, we should hesitate to consider it the result of defective reasoning.

Is this unsatisfactory to you? Do you complain that this does not make very clear the dividing line between responsibility and irresponsibility? I concede the justice of your criticism, but you must blame nature and not your speaker. Every such case is a problem requiring individual study and not easy of solution.

Nature does not range its subjects in straight lines with distinctly marked limits, one from another, simply "standing up to be counted." The phenomena of natural processes are intimately blended, one class merges into another by imperceptible gradations, defect and disease are relative terms purely, and it is often a puzzle to know how far their influence extends. Immorality and unlawful conduct are always warring with those tendencies in

man that develop him and enlarge his capacities for the betterment of the world, and that raise him to a higher level in the scale of animal evolution. They are therefore states which nature abhors, unnatural states, and in every case we must encounter more or less of the evidence of unnatural functioning.

The broad general distinction which separates responsibility from irresponsibility, which divides crime in a legal sense from defect and disease, relates to the possession of the normal degree of self-control and to the ability of the person to comprehend the ethical import of his acts. Where both method and motive are apparently natural and normal we should expect the act to be the result of normal processes and the product of natural law, but where the motive is an unreasonable or unnatural one, and where the method discloses defective processes of reasoning, we should consider carefully all the other functions and acts of the individual before we hold him to the full responsibility of a normal and healthy man. We should remember too that we are self-constituted judges of the moral quality of the acts of our fellow-men.

The necessities of the social relations are the only excuse for our action, and we should not impose upon our fellows responsibilities that Divinity itself never required of them.

Abstract.

RESECTION AND IGNIPUNCTURE OF THE OVARIES.

TRANSLATION AND ABSTRACT BY

HUNTER ROBB, M. D.,

Professor of Gynecology, Western Reserve University, Cleveland.

The question of conservative surgery in dealing with ovarian disease has received a further contribution from Pozzi. In the *Revue de gynécologie et de chirurgie abdominale*, January and February, 1897, he deals with the value and methods of resection and ignipuncture. Of his

long and valuable article we herewith give a brief abstract:

Each ovary contains myriads of ovules, every one of which is open to impregnation. Where, therefore, the smallest portion of the ovary has been left behind, pregnancy has repeatedly followed, even after what were supposed to have been complete operations. Pozzi, therefore, in dealing with his own work and that of other authors along this line, considers that two broad facts have been established: (1) The relatively benign character of the operation; (2) The continuance of the menstrual function when only a small portion of a single ovary has been left behind.

Various conditions exist in which complete unilateral alteration is accompanied by morbid processes confined to a portion of the adnexa of the other side. The cases may be arranged broadly in four categories: (1) Benign neoplasms; (2) Neoplasms of doubtful malignancy; (3) Neoplasms which are certainly malignant; (4) Chronic ovaritis.

(1) Cysts of the ovary which are not colloid or papillary are generally benign. The same may be said of dermoid cysts. In the case of proliferating cysts, however, there is always great danger of cancerous degeneration. But even in cases of the last type, especially when dealing with a young woman in whom fecundation should enter into consideration, provided that the cysts have all the signs of benignancy, Pozzi does not advise the removal of the whole organ, but would leave the woman a chance of bearing a child. Even in the case of a malignant growth, pregnancy may occur before recurrence has taken place, and then, when the neoplasm reappears, there is still time, as a rule, to do a radical operation. Microscopic cysts sometimes escape the operator, so that it is always necessary to take into account any clinical symptoms which might point to malignancy.

(2) We meet with instances in which a voluminous multilocular colloid cyst has destroyed one ovary while the other is partially affected in the same way. Where

the weight of evidence is in favor of malignancy, both ovaries should be removed.

(3) When we find an undoubtedly malignant process, even although it be apparently confined to one side, total castration is justifiable, since it is almost certain that the other side will sooner or later be affected. Certain glandular proliferating cysts, especially those in which there is a large proportion of solid or semi-solid substances, and all papillary cysts, must be treated as malignant growths, because it is difficult to distinguish the mild from the malignant form.

(4) In cases of chronic ovaritis the almost complete integrity of the tube is a necessary condition in deciding upon the preservation of the ovaries. Artificial opening of the lumen in the tube seldom gives the desired result, and when the cavity of the tube is infected the procedure is dangerous. The enlargement by dilatation of an insufficient orifice, however, is often feasible. In deciding upon what procedure to adopt, catheterization of the tubes will often aid us. In advanced cases of sclerosis of the ovaries complete removal is necessary.

In what cases of chronic ovaritis is a partial operation indicated? This question may be discussed under three heads: (a) Follicular cysts of the ovaries are of frequent occurrence and are a product of abnormal ovulation. They vary in size from that of a small hazel-nut to that of a large walnut. Their contents may be either serous or hemorrhagic. Sometimes no healthy tissue is left in the ovary. Provided that the tube is sound and that part of the ovary is healthy, resection of the cysts is sufficient, and part of the ovary may be left behind. (b) Cysts of the corpus luteum rarely contain fluid and generally form a solid mass. They are the result of abnormal ovulation with an increase of interstitial ovarian tissue. Their presence does not necessarily imply total degeneration of the organ, and as a rule preservation of a healthy portion is possible. (c) Sclerocystic or microcystic ovaritis is characterized by the presence of numerous small cysts which exist independently from lesions of the tubes.

Although many authors have denied that these cysts are pathological, it is certain that many women in whom these have formed the only ovarian trouble have been cured by the removal of the altered organ. Observation alone can determine whether it is wise to endeavor to preserve fecundity in these cases. Routier's two unsuccessful attempts at conservation were made in complicated cases and do not prove that this method is always inadvisable.

In the case of relatively extensive lesions resection is necessary; in microcystic degeneration, some authors recommend puncture with the bistoury and object to the cautery as dangerous. Sometimes the region containing the microcysts must be resected, or ignipuncture must be practised; sometimes both procedures may be indicated. The objection to the use of the bistoury alone lies in the fact that the walls of the cysts are left undisturbed, whereas the cautery not only destroys the walls and acts as a vigorous resolvent in chronic inflammation of the ovary, but after cauterization the surfaces within the peritoneum are sterile. Cauterization alone favors the absorption of the tissues already attacked, and resorption of the eschar takes place without inflammation. It is true that in an organ containing racemose glands the cautery might obliterate the ducts of some and bring about microcystic degeneration. But this is not true for the follicles found in the ovary. In deciding the point as to which ovary the conservative treatment shall be applied, all attention must be centered on the sounder of the tubes.

OPERATIONS.

We now come to the various operations which may be indicated, and shall discuss them briefly in detail: (A) *Resection.* The ovary is seized firmly at its base to insure immobility and the control of hemorrhage. The part to be sacrificed is marked out by deep incisions. The segment is then dissected out, any shreds of the cyst wall being trimmed off and the wound being hollowed out so that an empty cavity is left. In the case of a large follicular cyst, or a cyst of a corpus luteum, the segment to

be removed is often wedge-shaped, and sometimes makes up about four-fifths of the whole ovary. When dealing with sclero-microcystic agglomerations it is sometimes advisable to remove a wedge from one end, or at other times a median slice. Sometimes the ovarian parenchyma is so full of cysts that the operation necessarily becomes quite extensive. If small cysts are discovered on the surface of the wound they may be obliterated by means of the thermo-cautery. The wound is then cauterized with the flat side of the thermo-cautery and brought together with fine but sufficiently strong catgut sutures. If bleeding continues, two deep sutures of fine silk will generally overcome the difficulty.

(B) *Ignipuncture.* The Paquelin cautery is used at a cherry-red heat. The finger seeks for the depressible points on the surface which correspond to the deeper cysts. The point of the cautery then opens up these cavities and is allowed to rest on the walls for one or two seconds. Sometimes the ovary may be slit up lengthwise, and the cysts thus brought to sight may then be punctured and cauterized. This procedure is especially adapted to the edematous form of microcystic ovaritis. Bleeding of any importance is rare, and when it occurs can be stopped by means of a catgut suture.

(C) *Supplementary Operations.* (1) Abdominal hysteropexia is useful in obstinate cases of retroversion, but it must be remembered that the uterus frequently resumes its normal position, especially when one of the ligaments has been shortened. (2) Salpingorrhaphia is often employed to prevent the fringed extremity of the tube from being left at too great a distance from the resected or ignipunctured ovary. In order to facilitate fecundation the mouth of the tube is fastened to the ovary by means of interrupted catgut sutures. But before the tube is fixed to the ovary the caliber of the orifice must be re-established. (3) Extirpation of the little Wolffian subtubular cysts. These vary in size from that of a small pea to that of a walnut. One or two are generally found. In such a cyst the wall is thin and the contents are transpar-

ent. The incision having been made into the peritoneum between the tube and the cyst, the latter is partially enucleated by means of pressure. The operation is completed with the scissors. The wound is cauterized and closed with catgut sutures. In all laparotomies it is advisable to examine carefully the ileo-cecal appendix.

SUMMARY OF RESULTS.

Pozzi adds to his article tables which contain a résumé of 62 conservative operations upon the ovary performed between November, 1891, and the end of January, 1897. From his six years' experience he believes himself justified in expressing himself with some certainty as to the favorable results of conservative treatment, and has arrived at the conclusion that a larger proportion of cases are benefited in this way than by the radical operations. He insists that the total suppression of the functions of the ovaries not infrequently engenders other disorders. The tables contain details of 62 cases. The patients all recovered quickly from the operation itself, and the majority were cured. Eight supplementary operations were performed, 5 being laparotomies. Of these 8, in 3 the ovaries which had been previously submitted to ignipuncture were removed. In 3 cases vaginal hysterectomy was performed. In one case histological examination of the ovaries showed that no injury had been caused by ignipuncture, and that normal ovules had existed after this procedure. One woman died from perforation of the small intestine. In this case anterior colpotomy had been performed, and the finger had been thrust in to evacuate the pus. For the reason that laparotomy enables the operation to be done under the eye, it is to be preferred to hysterectomy. Of the 62 patients, 4 were operated on too recently to justify a judgment as to final results. Ten disappeared from view. The remaining 48 have been seen at various times. Of these, 33 were entirely cured or greatly improved. Twelve out of 48 became pregnant, one patient on two occasions. Seven of the 48 were not benefited.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

A CHANCE FOR THE REFORMERS.

The casualties incident to the game of foot-ball are so numerous and so severe that the game, as played, should be suppressed by public opinion or, if necessary, by law. What prize-fighting does on a retail scale, foot-ball does at wholesale. The list of injuries for any month of the season includes broken collar bones, broken fingers and toes, broken legs and arms, cut heads, faces, and eyes, sprained knees and ankles, wrists and backs, and uncounted bruises and gashes. Many players will be crippled for life, and occasionally a life is sacrificed outright. The game is not only dangerous, it is brutal and degrading.

We do not expect our boys to take their exercise and

develop their brawn in playing dominoes or crocheting tidies, but there are more healthful and safer ways of acquiring strength and skill, courage and endurance, than by the game of foot-ball — ways which leave no good reason why the game of foot-ball should not be abolished.

Do you say that foot-ball “draws a great crowd and interests people in athletics?” Why, so does prize-fighting. “Oh, but foot-ball does not bring out a prize-fight crowd. Ladies like the game and attend it.” Why, so did ladies attend the Coliseum and witness the gladiatorial contests. Are we going back to that? That it “draws a great deal of attention to the institution supporting (or supported by) the team?” So would a bull fight, or a lottery scheme. That “it is a mental training because it requires head work in a foot-ball game?” As the *Cleveland Leader* says, “so it does in a goat-fight.”

It is a humiliating confession for any institution of learning to make that its popularity depends upon the notoriety gained by its students in a brutal exhibition of physical prowess. If this is necessary to our system of education there is something the matter with the system. Such a game as foot-ball is no more necessary to the development of body or mind in any manly or desirable quality than it is necessary to have real battles and skirmishes at West Point, and kill or cripple half of the cadets, while they are getting their military education.

Most of our educators would hold up their hands in holy horror and hasten to frame a law of interdiction if an attempt were made to introduce the German custom of duelling among students. Yet the injury received during the duelling is seldom if ever more than a flesh wound on the face or scalp, and not to be compared in severity with the broken bones, wrenched spinal columns, or bruised internal organs common in foot-ball.

Where are all the reformers while this chance for an exhibition of their energies is going to waste? Where are those zoöphilous individuals who wail over a few guinea-pigs and dogs used for scientific investigation? Are not the young men of the country as well worth your anxiety?

It would seem that these brawny young fellows should prove more attractive than cats and dogs to any but incorrigible natural perverts. Do you say "the young men are capable of taking care of themselves?" Are they? Do they so? How is it in the matter of drinking and worse vices upon which it is necessary to place restraints?

Now here is an opportunity for the anti-vivisectionists and the anti-vaccinationists really to do something. Why waste their talents and their tears on things that do not need reforming, when a job of genuine usefulness is offered at good pay — good pay in a large crop of sound and vigorous legs and heads and arms. For once in their lives they will have sense and reason on their side and find themselves working in wholesome company. And where are the church people and the moralists and the educators and all the setters of the world to rights, and the good citizens generally, while all this is going on?

Let the public be instructed what a ruffianly game foot-ball is. Let the ladies understand that it classes with prize-fighting and bear-baiting. Let educators be shamed out of advertising their institutions of learning by the superiority of their students in the tactics of the bull and the billy goat. Create an enlightened public opinion which will compel a change in the rules of the game or prohibit it by law.

Failing in this there remains one expedient: The national government might send all incorrigible foot-ball cranks to a reservation out West, as it does its other wards who persist in wearing long hair and clinging to savage practices. There let them paw up the earth and gore each other and the mountain sides till all are exterminated.

DR. THOMAS W. EVANS.

Dr. Evans, American, long resident in Paris; dentist, diplomat, humanitarian, millionaire, is dead at the age of 74 years. Dr. Evans's extraordinary career and immense fortune owe their existence to a peculiar combina-

tion of personal characteristics and the 'unusual opportunities for making them effective. With a remarkable mechanical genius and an inclination and capacity for continued hard work, he combined a genial and humane disposition, together with a high degree of diplomatic tact and shrewdness. His mechanical ability found its opportunity in the then backward condition of development of dental science and art, and in the advance which the last half-century has seen his work has an important place. With his geniality and political instinct, and possessing the friendship of the emperor, he was in a position where he was able to accumulate his large fortune and assume the position in which the world knew him.

Other men have had equal mechanical skill, both in and out of the dental profession, as the progress of the mechanical arts in various directions testifies. Other men have shown equal political and diplomatic ability, and others have shown themselves equally willing and able to promote humanitarian reforms in time of war as well as in peace. But to Dr. Evans it was given to have all of these qualities united in the one man, and then to find the opportunity ripe for their exercise and development in co-operation.

When very young he was apprenticed to a goldsmith, where he learned the manufacture of delicate instruments for dental and medical use, and became exceptionally skilled in making them. Coming in contact with professional men in the prosecution of his work, he formed the desire to pursue dentistry as his lifework, and entered the office of a prominent Philadelphia dentist, and also studied at Jefferson College. At an early period in his dental practice his work attracted the attention of Dr. Brewster, an American dentist already practising in Paris, who finally secured his services. On going to Paris the favorable prospect led him to decide on permanent practice there, but he remained with Dr. Brewster for a short time only. He was among the first in Europe to use gold for filling teeth, and having knowledge of the best methods then in use and the ability to improve on

them, he soon acquired an enviable reputation, and secured as one of his earliest patrons and friends the Emperor Napoleon III. Through him he was introduced to many European notables and potentates, and served them in a professional capacity.

During the Crimean war, becoming impressed with the faulty sanitary conditions in camps and hospitals, he secured the emperor's coöperation and was sent to investigate and to devise improvements. The result was that he called the world's attention to this subject, and the needed reforms were made, and improvements have continued in the army sanitation and ambulance service of all civilized countries. Dr. Evans was also active in the work of the United States Sanitary Commission which accomplished so much in the same line during the war of secession; and during the Franco-Prussian war he directed the operations of the ambulance corps of the Red Cross Society, and was perhaps the only man allowed to pass freely from camp to camp.

His inborn capacity for diplomacy enabled him to perform valuable service for Napoleon, and for his own country, to which he was always loyal. It is said that he was instrumental in keeping amicable relations between this country and France during our civil war. His intimate association with European monarchs and statesmen gave him valuable opportunity for serving the emperor, and the opportunity was undoubtedly used, but the history of such service will probably never be published. The bulk of his fortune was acquired, not in the practice of his professional work, but mainly by investments in property in Paris, on the lines of new avenues and boulevards, before their projection was generally known, which he was able to make by reason of his familiarity with Napoleon's plans for beautifying and rebuilding the city.

The service which Dr. Evans performed for dentistry was not so much what he accomplished by his technical skill, for others have done as much; but his personal qualities enabled him to do much in elevating the status

of the profession before the eyes of the world. He has been also largely instrumental in giving American dentistry the high reputation which it has throughout Europe. So advantageous is the possession of such a title that one everywhere sees the sign of the "American dentist" bidding for the patronage of the populace, although, in some instances, the Americanism may rest on a very flimsy foundation.

Dr. Evans had aided in establishing the Lafayette Home, in Paris, for young American girls who go there for study, as well as in other projects for the benefit of those who needed aid. Remaining, in spite of his half-century's residence in Paris and his many interests there, always an American at heart, he had planned to use a due share of his wealth in founding an institution in this country which should perpetuate his name, and in aiding established institutions, but it is not known but that his sudden death may have interfered with the completion of his plans in this direction.

F. K. S.

THE LAW REQUIRING PHYSICIANS' DEATH-CERTIFICATES.

The arrest of two prominent physicians of this city for failure to report deaths to the health office was in pursuance of the course determined upon and announced by the health officer some time ago, in order to secure better compliance with the law on the part of the medical men in this city. The two victims were unfortunately prominent enough to be made the scapegoats for others who were equally guilty with, or even more guilty than those arrested. While counseling compliance with the law as it stands, in spite of its faults, so long as it is the law, we believe that the main trouble lies further back than the action of individual physicians. We believe that there have not been malicious violations of the law, but that duties which should never have been imposed upon the physician have been overlooked and neglected.

The city ordinance relating to this matter reads as follows: "It shall be the duty of every physician, surgeon, or other attendant, at the time of the death of any person, or who may have actual knowledge of the same, to report to the office of the Board of Health the date of the death, name of the person deceased, age, sex, color, residence, and the cause of death, both primary and secondary, within twenty-four hours thereafter, and upon blanks furnished by the Board of Health, where they can be procured."

While there is no good reason why the physician, at the death of a patient, should not certify regarding his opinion as to the cause of death, it does not seem proper to make him the one mainly responsible for reporting the death to the health authorities. This should be made the duty of the responsible head of the household in which the death occurred, or his representative. Enforcement of the law should be secured by prohibiting the carrying through the streets, burial, or any other disposal of a dead body, without a permit issued from the health office, or by the police department acting in conjunction with the health department. Such a permit should be issued only on receiving a certificate as to the cause or circumstances of death, signed by a legally registered physician of the county (the signature having been written by the physician himself and not forged by the undertaker), or by the coroner or the coroner's representative. That is to say, in order to detect as far as possible the commission of any crime in connection with a death, and to have complete records, every case in which a satisfactory physician's certificate is not presented should be investigated by the coroner, as well as those cases in which there is special reason for suspecting crime or for placing responsibility. This view of the coroner's function does not contemplate the wide range of police duties and extensive investigation which seem now to be considered within the province of the coroner, but only the investigation of the medical and surgical aspects of the case, which would seem to be the only class of duties appropriate to

the office so long as it is considered an office to be filled exclusively from the medical profession.

Under the present registration law, the medical profession of the community, a body of legally qualified and registered physicians, has a recognized legal status such as it has not had at any time before, and it should be required to assume a due responsibility. Such responsibility should be, however, in relation to the medical matters of the community, and should not require of them ordinary police duties further than are expected of all other citizens. The duty of reporting the occurrence of a death is not the duty of the physician as such. The duty of testifying as to the cause of death is, however, peculiarly within the province of the physician, and the physician should be held responsible for his statements in the certificate signed by him, and the signature should be witnessed by a responsible person, to assure the authenticity of the certificate when presented to the proper officials, and to prevent such prostitution of the law as has at times occurred, when the physician's name has been appended to a statement which was not in any way authorized by him. The subject is by no means settled permanently by the present law, but is bound to come up at some time for further consideration, when remodeling on more logical lines will be demanded.

F. K. S.

Periscope.

DECOMPOSITION OF CHLOROFORM.

Béhal and François (*Jour. de pharmacie*, 1897, p. 417) recommend the addition of a little alcohol to chloroform in order to prevent its decomposition when exposed to the air or sunlight, carbonyl chlorid being formed. They find that pure chloroform cannot be kept under these circumstances.

ALBUMOSES AND PEPTONES IN INTRA-VASCULAR INJECTIONS.

Fiquet (*Compt. rend.*, 1897, p. 1371) claims that albuminoids and peptones, if pure, can be injected repeatedly

into the veins of dogs without preventing coagulation of the blood, and without producing narcosis or tremors. He suggests that the poisonous effects generally ascribed to these substances are really caused by albumo-toxins, ptomains, etc.

ACTION OF IODIN ON PROTEIDS.

Lépineois (*Jour. de pharmacie*, 1897, p. 561) has produced an "iodocasein" of constant composition, which he is investigating therapeutically. It may possess some valuable features as a drug.

HEMOCHROMOGEN AS A TEST FOR BLOOD.

Donogány (*Virchow's Archiv*, 1897, p. 234) finds the formation of hemochromogen crystals the most delicate of any of the tests which he employed in examining urine, feces, sputum, etc., for blood.

NEW BILE PIGMENTS.

A. Dastre and N. Floresco (*Compt. rendus*, 125, p. 581) find that in the bile there exist two coloring matters, a yellow and a green, which are called by the authors *biliprasin* coloring (Staedeler). The color of the gall is due to these. They are considered as intermediary products in contradistinction to bilirubin, the primary, and biliverdin, the final coloring matter. The authors give chemical methods for their differentiation. The *yellow-brown biliprasin* coloring (sodium biliprasinate) is the one which gives the yellow color to calf's bile, and is different from bilirubin. Biliprasin is precipitated by carbon dioxid, whereas the carbonates of bilirubin and biliverdin are unstable. The biliprasin pigments are oxidation and hydration stages of bilirubin and biliverdin. All the bile pigments are derived from bilirubin as the fundamental coloring matter. The spontaneous transformation of this pigment is due to the presence of oxygen, the reaction of the solvent, warmth, and light. A distinctly alkaline reaction is unfavorable to the formation of the biliprasin coloring and favorable to the stability of bilirubin. Neutral or acid reaction favors the production of the green biliprasin. Moderate heat changes the bilirubin to biliprasin. Light quickly changes bilirubin to biliprasin and biliverdin. Probably the change of bilirubin takes place in the hepatic cells. At all events, it is progressive in the gall bladder. The conditions for the artificial

transformation (oxygen, light, heat) are, however, not present here. We must therefore suppose that an oxidizing agent is present in the organism, which is present in the liver and in part passes into the bile.

CALCIUM COMPOUNDS IN DIABETES.

According to v. Moraczewski, of Zurich (*Centralblatt f. in. Med.*, 36, 37), who studied the increased excretion of calcium compounds in diabetes, recommends the giving of calcium compounds, since if this be done the sugar will diminish in any diet.

STRYCHNOUS HYDRATE.

Dreser (Medical Section, Natural Science Society, Braunschweig, Germany), by the action of metallic sodium on hot alcoholic strychnin solution, obtained a new alkaloid, strychnous hydrate, which, in almost all its pharmacologic properties, was antagonistic to strychnin. However, it produces narcotic paralysis somewhat similar to morphin, only more energetic. Soon after its administration a paralysis of the respiratory center is noted by the appearance of Cheyne-Stokes breathing. The simultaneous introduction of strychnous hydrate and strychnin or picrotoxin prevents action of either. Inasmuch as the narcosis of strychnous hydrate is followed, on frogs and rabbits, by a paralysis of the respiratory center, it cannot be used as an antidote for strychnin, and therefore chloral hydrate and chloroform are alone to be recommended in such poisoning.

AUTO-INTOXICATION OR DISPOSITION TO CONTRACT DISEASE.

This, according to Poehl (*Chemiker Zeit.*, 1897, 36), can be determined by urine analysis. The auto-intoxication is due to a diminished alkalinity of the blood. When the oxidation processes of the body are arrested, the intermediary nitrogenous products which are produced by the retrogressive change in the proteids are increased, and the urea nitrogen sinks under 90 per cent.

Such conditions point to an auto-intoxication, which likewise may be anticipated if the total chlorids of the urine have suffered a diminution; that is, when sodium chlorid to urea is less than one to two.

As a good criterion for judging the alkalinity of the blood, the total phosphoric acid in the urine to that in

the disodium phosphate may be taken. In diminished alkalinity of the blood the disodium phosphate sinks under 50 per cent., which makes a supposition of auto-intoxication justifiable.

Among Our Exchanges.

The discrepancies in tests for albumin in urine, owing to the presence of mucin, cystin, peptone, and the like, and arising from the change of coagulable into non-coagulable albumin during the process of rendering alkaline urine acid, are a constant source of annoyance to the practitioner who has not first-class laboratory facilities and abundant leisure time. It is claimed by DR. J. M. KING¹, however, that the *prussiate of potash* test avoids these sources of error, in that it precipitates all forms of albumin, but does not precipitate phosphates, urates, peptones, resins, alkaloids, etc., so that no correction or precaution is necessary. The test reacts promptly, and the whole precipitate is albumin. The reagents are as follows: Acetic acid solution, sp. gr. 1.044; easily prepared by mixing one part of glacial acetic acid with two parts distilled water. Four ounces are enough to prepare at one time. Ferrocyanid solution, — potass. ferrocyanid. (yellow prussiate of potash) grs. xxiv. to f3 j. distilled water. Eight ounces are enough of this solution to prepare at one time. Pour into a clean test-tube fifteen to twenty drops of the acetic acid solution, add two to three times as much ferrocyanid solution, and shake thoroughly. The tube is then filled one-half to two-thirds full of clear urine. The reagent is mixed with the urine by moderate agitation, and if there be albumin present it will be at once precipitated through the whole volume of the liquid. If the amount of precipitate be so slight as to be doubtful, put into another test-tube the reagents as before, and add an amount of water equal to the amount of urine added in the test. Compare the tubes in a good light against a dark back-ground, and the slightest trace of albumin will become apparent. Interesting and valuable as are the data derived from the counting of blood corpuscles and the estimation of the percentage of hemoglobin, the expense of the apparatus and the com-

¹ *Med.-Surg. Bulletin*, Nov., '97.

plexity of the technique practically limit the availability of such data to those who have well equipped laboratories at their command and trained assistants to conduct the examinations. We are grateful, therefore, for any simplification of procedure which promises to bring the procurance of these data within the coefficient of practicability. Since it was shown by HAMMERSCHLAG that the relation of the specific gravity of the blood to the amount of hemoglobin was practically constant, more so, in fact, than that between the hemoglobin and the number of red corpuscles, DR. C. E. IDE² has labored to develop a simple portable and inexpensive specific gravity apparatus. It looks as though he had succeeded. The outfit is as follows: (1) A hydrometer jar; (2) a hydrometer or urinometer; (3) a pipette of small caliber; (4) a glass rod; (5) some steel pens (a glover's needle is not a bad substitute); (6) a bottle of chloroform; (7) a bottle of benzol; (8) a bottle containing a mixture of the latter two; (9) some filter paper. The mixture of chloroform and benzol (for the first time you test you may begin with equal parts) is poured into the hydrometer jar. The finger of the patient is sterilized and pricked with a sterile pen from which one of the nibs has been broken. A drop of blood which has oozed from the puncture (it must not be pressed out) is sucked into the pipette, gently forced out over the center of the mixture, and shaken off. All the blood should not be forced out of the pipette, or air will be included in the drop and the result vitiated; a little blood should always be left in the tip of the pipette. If the drop of blood sink, a little chloroform must be added to increase the specific gravity of the mixture; if the drop rise, a little benzol. After each addition, the mixture should be stirred with the glass rod, in order that the added fluid become thoroughly incorporated, but it should be stirred carefully so as not to break the drop. When the blood-drop following the current in the mixture moves round and round, but shows no tendency either to rise or to sink, the specific gravity of the mixture coincides with that of the blood and may be recorded with the hydrometer, after which the mixture is filtered into its bottle to be used again. Everything, and the hydrometer jar especially, must be kept scrupulously clean, for minute particles of foreign matter floating in the fluid may adhere to the blood-drop and vitiate the result. Given the specific gravity, the percentage table

² *Medicine*, June, '97.

gives the rest, not with absolute accuracy, but within a reasonable approximation, viz.:

<i>Specific Gravity.</i>	<i>Hemoglobin.</i>
1033	25 per cent.
1035	30 "
1038	35 "
1040	40 "
1045	45 "
1048	55 "
1050	65 "
1053	70 "
1055	75 "
1057	85 "
1060	95 "

Of course every practitioner knows, or should know, that the hydrometer he uses is like as not somewhat inaccurate as to readings, and that its readings vary more or less with the temperature; but yet this method gives a practicable way by which he may learn with reasonable certainty whether his cases of tuberculosis, anemia, chlorosis, and the like are gaining or losing hemoglobin under treatment. The difficulties obtaining in ordinary practice in the examination of fresh films of malarial blood, and the somewhat tedious technique of staining, have likewise deterred the general practitioner from undertaking the systematic diagnosis of malarial conditions through the detection of the plasmodium in the blood. If he take the pains to get a fresh specimen, it may be far from fresh before the emergencies of his business permit him to examine it; and as for staining, it may be long before he can find time for that process. But DR. NEIL MACLEOD³ asserts that in the dried, unstained cover-glass film crescents and larger pigmented parasites can be made out with a good quarter-inch objective, and the smaller pigmented forms can be easily seen with an oil-immersion twelfth. A small box of cover-glasses and a sheet of note paper are all the apparatus the physician need carry. One edge of the sheet of note paper is snipped at intervals of half an inch, each snip being about an inch and a half deep, the snipped edge is folded inward to the middle of the sheet, and the other half of the sheet is folded over all to keep the strips clean and ready for use. Finger-tip and cover-glass are cleaned and prepared in the usual way, one of the strips of note paper is torn off the sheet, and the straight edge drawn the full half-inch

³ *Lancet*, July 10, '97.

of its breadth through the drop of blood, which should not be larger than the head of a pin. The edge of the strip is then quickly drawn across the cover-glass before the blood has time to dry on the paper, and the strip should be held nearly at right angles to the surface of the glass. Too large a drop of blood gives too much blood on the strip, and that results in too thick a film for examination. If you have succeeded in spreading a thin quick-drying film, many good fields will be found where the corpuscles lie flat and practically unaltered. The cover-glass must be mounted dry. Any medium which runs between it and the slide will cause every characteristic to disappear. It can be gummed to the slide with a strip of thin paper in which there has been left a window exposing the blood-smear. For diagnostic purposes these films are better than stained ones, for the process of fixing and staining causes parasites distinctly visible in the dried film wholly to disappear.

In *uremic convulsions* with full hard pulse, guaiacol, which, when rubbed upon the skin, is quickly absorbed, causing rapid and marked lowering of blood pressure and of temperature, and free diaphoresis as well, seems to be a promising remedy. DR. J. F. R. APPLEBY, of Washington, D. C.,⁴ has used it in two cases of *puerperal convulsions*, and with complete success. Both patients were much swollen and had albuminuria, and convulsions were severe, threatening to be fatal. From forty to fifty drops of guaiacol were poured on the abdomen and rubbed in, and at once the pulse became soft, free diaphoresis came on, and the convulsions rapidly subsided. In the severest case a hypodermic of one-fourth grain of morphin was also given. It looks as though we would not go far wrong if we should include guaiacol also in our *armamentarium obstetricum*. And this reminds us that the therapeutic field of epidermic medication may be wider than we have so far realized, and that the *poultice* which has been passing somewhat into desuetude may find a new and enlarged use as a vehicle for such medication. Take for instance the following recipe:⁵ Powdered opium, ten grains; menthol crystals, half an ounce; alcohol; linseed oil, one ounce. Mix the menthol and opium with the alcohol; incorporate the linseed oil thoroughly with the flaxseed meal; then mix in the alcohol containing the menthol and opium. Kept in an airtight can the mixture remains moist and is ready for use at any time by mixing with a

⁴ *Boston Med. and Surg. Journal.*

⁵ *Charlotte Medical Journal*, Sept., '97.

proper amount of boiling water. They say that this poultice will work magical relief in a child screaming with pleuritic or abdominal pain, and we can't see why, if oil of wintergreen were substituted for the menthol, it were not a comforting application to a *rheumatic joint*, or, if guaiacol, why the practitioner could not poultice an *orchitis* again to the comfort of the patient and without the shameful sense of being a hopeless old foggy. TUCKERMAN.

New Books.

PATHOLOGICAL TECHNIQUE. A Practical Manual for the Pathological Laboratory. By Frank Burr Mallory, A. M., M. D., and James Homer Wright, A. M., M. D. With 105 figures. 395 pages. Philadelphia: W. B. Saunders, 1895. Price, \$2.50, net. Galbraith, Agent, New England Building.

The plan which the authors evidently had in mind when projecting this book, of combining the various technical processes of pathology in a consecutive whole, is good and desirable, providing it can be carried out. This task is bravely attempted, and the subject of post-mortem technique is fairly presented. Here, however, deep water is encountered, and the balance of the book is devoted to an attempt to wade through the subjects of bacteriological technique, bacteriology, histological technique, and clinical pathology — each one of which has required a volume of its own for satisfactory presentation — in a single work. The natural result follows in the production of a manual too technical for beginners, and too elementary for advanced workers. The methods which are described are already well known to experienced laboratory students, and are not presented in sufficient detail to be useful to the inexperienced. Of the various subjects discussed, that of histological technique is most satisfactorily presented, as would be expected from Dr. Mallory's well known skill and originality in this branch.

Since this book combines, even in an imperfect way, a discussion of the several special branches of pathological laboratory technique, it will prove useful to students who have had one or two good courses of instruction in the pathological laboratory. It will serve a temporary purpose, before the student has extended his knowledge sufficiently to become familiar with the numerous and valuable works devoted to special lines of technique.

OHLMACHER.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF MICROSCOPIC AND CHEMICAL METHODS. By Charles E. Simon, M. D., late Assistant Resident Physician, Johns Hopkins Hospital, Baltimore; Fellow of the American Academy of Medicine. Second edition, revised and enlarged, with 133 illustrations and 14 colored plates. Lea Brothers & Co., Philadelphia and New York, 1897. 564 pages. Cloth, \$3.50.

That Dr. Simon's book has been put forth in a new edition in the short space of one year after publication of the first shows that amid the accumulation of medical literature in all its diversity a gap still existed which it appeared adapted to stop. The subject of what may be called clinical laboratory work has developed so rapidly and has assumed a position of so great importance in general medicine, or more particularly internal medicine, that many who are ambitious to be at the fore in scientific diagnosis have been compelled to subject their diagnostic equipment, both mental and material, to a thorough overhauling. The necessary material equipment is not unduly extensive, and the ability to put it to proper use should be acquired by every general physician, directly, if possible, in order to secure the greatest benefit, or, if not so, at least by proxy, for the sake of his practice and his patients. As Dr. Simon asks in his preface, "Would it not be reasonable to suppose, however, that a physician who is overwhelmed with work to such an extent that he cannot find the time to make use of aids in diagnosis which are quite as important as the stethoscope, the laryngoscope, or the ophthalmoscope, would be in a position to employ an assistant in his laboratory?"

The book treats in detail, with special reference to microscopic and chemical examination, of the blood, mouth secretion, gastric contents, feces, nasal secretion, sputum, urine, transudates and exudates, cystic contents, cerebro-spinal fluid, semen, vaginal discharge, and mammary secretion, in as many chapters. In each chapter the normal conditions are first briefly considered, then the pathological conditions, and finally the methods of examination in such detail as to enable the physician to obtain satisfactory results, even if he have not the advantage of an extended training in laboratory work.

The topic with which the book opens, and one of the most important, because of its value in a class of otherwise often obscure cases, as well as on account of the rapid and recent development of its *status præsens*, is the examination of blood. This includes chemical tests, spectroscopic examination, and methods of staining for mi-

croscopic study; also cell counting, hemoglobin estimation, and the use of Daland's hematocrit, ending with a consideration of the bacteriology and parasitology of the blood. A considerable proportion of the well executed colored plates with which the volume is provided are to be found in this chapter. At the end of the article on blood are given, in most convenient tabular form, the conditions with reference to the various blood elements found in the more important diseases of the blood, and a similar table in its appropriate place aids in the differentiation of the principal stomach diseases.

A source of diagnostic information which is likely to be slighted, and yet may give much aid at times, is the examination of feces. It may be employed with but little special apparatus and training beyond possession and ability to use a microscope of moderate power. This is treated of in some sixty pages, abundantly illustrated. Urine analysis appropriates a greater space than any other one subject, being as fully treated as in most exclusive manuals devoted to it. The chapter on puncture of the subarachnoid space and examination of the cerebrospinal fluid is almost entirely new in this edition. Space does not allow consideration of the book in further detail, but it may be said that it admirably meets the wants of those for whom it is intended, and every young practitioner, especially, seeking to do his best, should have it at hand, and make use of aid which the clinical laboratory may give. In that way he may meet half-way the older man whose larger observation and riper experience partly make up for the lack of the modern innovations in medical practice.

The purchaser of this second edition has the advantage of sixty added pages and numerous changes in the text, many parts having been rewritten, with a number of new plates and valuable additions in several of those in part retained.

F. K. S.

THE AMERICAN ACADEMY OF RAILWAY SURGEONS. Report of the Third Annual Meeting held at Chicago, September 23-24-25, 1896. Edited by R. Harvey Reed, M. D., Columbus, Ohio. American Medical Association Press, Chicago, 1897.

This volume contains the papers read before the meeting of the American Academy of Railway Surgeons, at Chicago, 1896, with their several discussions; also, the transactions of the society at this meeting. This is the

third book of its kind to appear, each one showing a steady and encouraging growth over its predecessor. It should be of particular interest to all railway surgeons, since the author has so arranged the different subjects touched upon, with their discussions, as to make it a work of reference for the surgeon, which may be looked over quickly and with but very little labor, and because of the many new and useful "little" things which are brought to light, we are proud to say, at each succeeding congress of the medical fraternity. For this reason it behooves us all to become acquainted with the doings, if not of all, at least of the larger and better established associations of our country. Appended to the publication of the papers is the constitution of the society, with its by-laws, the official list of fellows, and list of honorary members.

STEPP.

ESSENTIALS OF BACTERIOLOGY: Being a concise and systematic introduction to the study of Micro-organisms for the use of students and practitioners. By M. V. Ball, M. D., Bacteriologist to St. Agnes Hospital, Philadelphia. Third edition. Revised. With eighty-one illustrations, some in colors, and five plates. 218 pages. Philadelphia: W. B. Saunders, 1897. Price, \$1.00. Galbraith, Agent, New England Building.

The subject of bacteriology is here thoroughly digested and a great deal of information relating to this department of pathology is condensed within the covers of the little compend. It is an admirable quiz compend for the student who desires to obtain his knowledge of bacteriology from books and recitations, and it should be good reading for the busy practitioner who wishes to obtain a smattering of the subject. It must be popular, since it has been on the market for six years, and is now in its third edition.

OHLMACHER.

VADE MECUM OF OPHTHALMOLOGICAL THERAPEUTICS. By Dr. Landolt and Dr. Gygax. Philadelphia; J. B. Lippincott Co., 1898. 138 pages. Price, \$1.00.

This little volume, arranged as a therapeutic index, with pathological conditions and remedial agents and measures, including many formulas, in a common alphabetical series, will be found of value as a reminder, but as such only; for the subject cannot be studied to advantage divorced so fully from ophthalmological principles

and diagnosis, and it is not so intended by the authors. Although of limited size and unassuming appearance, it yet contains a wider range of therapeutic allusions than will be found in almost any one of the most pretentious works on ophthalmology, and every one engaged in eye work or study would do well to have it within easy reach. Its scope is not limited to medicinal therapeutics, and some of the tables given in connection with management of refractive conditions and muscular anomalies will prove most convenient. The names of the authors are vouchers for the reliability of the book's contents. The translation was done with the aid of Dr. E. H. Neyman, of Milwaukee.
F. K. S.

TRUE TO THEMSELVES.—A PSYCHOLOGICAL STUDY. By Alexander J. C. Skene, M. D., LL. D. London, and New York: F. Tennyson Neeley, 1897. Cloth, \$1.00. Paper, 50 cents.

We have before now asserted that no good doctor ever wrote prose or poetry that was not worth reading, and we are not going to retract it now. Perhaps we were led by the author's eminence as a practitioner and writer in strictly professional lines to expect too much when he essayed the rôle of novelist. At any rate the story is not up to our expectations.

But the reader will say, "Tell us *why* you do not think this is a great novel?" Why? Because it lacks that graphic portraiture of its characters which makes the creations of the master of fiction to stand up in your imagination like persons you had really seen and heard and known. It lacks that vivid description of places and events which causes them to appear to your mind's eye like the scenes and incidents of a journey of your own taking.

It is wanting in the plausibility, naturalness, and sequence in the narrative, which makes you feel not only its possibility and its probability, but its reality. The plot is not bad. It would have served well enough with more skill in the telling. The sub-title, "A Psychological Study," led us to expect a fine insight into motive, a subtle comprehension and, perhaps, analysis of character. It is rather a report of a case of maternal impression, without even an effort at explanation of teratogenesis.

While the main theme is old among the writers of stories with a purpose, it is not yet too old to need new presentation. The evils of marriages of convenience and

the harm done by false social distinctions interfering to prevent marriage between those who are by nature suited for each other, are questions which may worthily and appropriately engage the mind and pen of the medical sociologist. Perhaps Dr. Skene would have presented his ideas more according to art in an essay or a series of essays than in a story.

Upon this as upon the fairness of our criticism you can be your own judge when you have read the book. Get it and read it. When any honest and earnest physician takes the time and trouble to write a book upon any interesting subject, it is worth any other doctor's time at least to read it.

PAMPHLETS RECEIVED.

GEORGE M. GOULD, M. D., of Philadelphia: SOME RELATIONS OF AUTHOR, PUBLISHER, EDITOR, AND PROFESSION; from *Bulletin of American Academy of Medicine*. LAW OF REFRACTION—CHANGE FOLLOWING INCREASE OR DECREASE OF BODYWEIGHTS; from *Medical News*. DR. TRAILL GREEN AND THE AMERICAN ACADEMY OF MEDICINE; from *Lehigh Valley Medical Magazine*.

W. T. HOWARD, JR., M. D., and J. M. INGERSOLL, M. D., of Cleveland: NOTES ON THE ETIOLOGY OF INFLAMMATION OF THE ACCESSORY SINUSES OF THE NOSE; from *Medical News*.

N. STONE SCOTT, A. M., M. D., of Cleveland: A CASE OF ABSCESS OF THE PROSTATE; from *Columbus Medical Journal*. GASTRO-ENTEROSTOMY, JEJUNO-JEJUNOSTOMY, AND JEJUNORRHAPHY ON THE SAME CASE; from *Cleveland Journal of Medicine*.

E. C. ELLETT, M. D., of Memphis, Tenn.: HEMORRHAGIC GLAUCOMA. Report of a Case, with Micro-photographs; from *Annals of Ophthalmology*.

C. H. HUGHES, M. D., of St. Louis, Mo.: SUICIDE.

CLARENCE A. VEASEY, A. M., M. D., of Philadelphia: PRIMARY SARCOMA OF THE IRIS. A Statistical Study, with Report of an Additional Case, in which the Growth was Successfully Removed by Iridectomy; from *Annals of Ophthalmology*.

A. F. SPURNEY, M. D., of Cleveland: THE MECHANICAL TREATMENT OF RETROVERSION; from *Cleveland Journal of Medicine*.

ALLEN DEVILBISS, M. D., of Toledo, O.: BRAIN SURGERY; from *The Medical and Surgical Reporter*.

DUDLEY P. ALLEN, M. D., of Cleveland: ORIGIN OF APPENDICITIS; from *Transactions of the American Surgical Association*.

Society Proceedings.

CLEVELAND MEDICAL SOCIETY.

Regular Meeting, November 12, 1897.

The program consisted of the following papers: "Experimental Research into the Prevention and Treatment of Surgical Shock," by Dr. George W. Crile; "The Infusion of Saline Solutions, with Reports of Cases," by Dr. Wm. H. Nevison.

The paper of DR. CRILE was a continuation of the subject of, and supplementary to the paper read by him to the society on September 10th. One of the features of this article was the comparison of different anesthetics in their relation to surgical shock. The doctor indicated a decided preference for ether from a standpoint of safety, but claimed that neither of them was able to overcome or inhibit efferent and afferent impulses, and consequently had not the same power to control shock in certain cases as well as cocain when properly applied.

It was stated that cocain applied to the trunk of a nerve above the seat of operation would absolutely inhibit all efferent and afferent impulses, and would thereby prevent the least exhibition of shock as indicated by the respiration or pulsations of the heart.

DR. NEVISON'S paper on "The Infusion of Saline Solutions" was listened to with much interest. It was explained that the solution was readily taken up by the blood-vessels from the cellular tissue into which the infusion was made, and that an improved condition of pulse immediately followed its injection in cases of profuse hemorrhages following parturition, or in other cases in which the circulation is largely depleted. This method was believed to be much safer than the injection of the fluid into the veins, on account of a diminished liability of getting air into the vessels, and also from the less danger of throwing extraneous matter into the circulation.

The infusion may be made at any point where the skin is loosely bound down, but preferably over the abdomen or in the dorsal surface. It may be injected into the peritoneal cavity if the circumstances are favorable.

DR. C. B. PARKER opened the discussion. He was pleased with the good work done by Dr. Crile, but thought his reasoning in regard to shock in surgical cases was

based upon analogy, and he would suggest the question as to whether the results obtained in his experiments on dogs would apply equally well to the human subject. The environments and mental conditions were thought to be important factors in the production of shock. After serious accidents there is a question as to when and how to operate to avoid shock. If the shock is due to irritating portions of the body which must finally be removed, it is well to do this at once and thus remove the cause as far as possible. Some of the remedies suggested for the treatment of shock were oxygen, morphia, quinin, strychnia, atropia, and the application of heat and cold.

DR. F. E. BUNTS: Dr. Crile's broad statement that shock cannot exist after use of cocain, which prevents efferent and afferent impulses, must be questioned if applied to the human being, for the most profound shock occurs from mental impressions. Delay of operations is one cause of shock. One of the exciting causes of shock is the laceration of tissue or bone in proportion to the proximity of one of the vital centers.

Favorable symptoms of recovery from shock are the return of warmth to the skin, improvement of pulse, brightening of the eye, quieting of nervous phenomena, and improved respiration.

DR. A. J. OCHSNER, of Chicago, stated that he had been much interested by the papers and valuable discussion. Subcutaneous injection of salt solutions and posture were of the greatest value in his hands. Experiments on animals were considered more reliable in these cases than upon man, who is liable to so many accidental conditions.

He favored quick operation and suggested the dangers of roughly handling the nerve trunks and vital organs. He believed that patients who receive no treatment often make the most speedy recovery from shock.

DR. W. H. HUMISTON used transfusion of salt solution and had also poured normal salt solution into the abdominal cavity with the result of improving the circulation and causing the elimination of effete matter. He used chloroform unless there was some special contraindication and believed there was much in the preparation of the patient. His advice was to study the urine, study the patient, regulate the functions.

The papers were further discussed by Drs. Feil and Lower, and by Drs. Nevison and Crile in closing.

Regular Meeting, November 26, 1897.

DR. ROBERT POLLOCK read a paper entitled "A Study of the Value of Ergot." The subject was handled in a scholarly manner, showing a careful preparation of the matter presented. It was discussed by Drs. Spenser and Tuckerman, and by Dr. Pollock in closing.

A supposed case of Hydrophobia was reported by DR. F. E. BUNTS, and the discussion which followed was quite amusing, if not instructive.

DR. BRAINERD referred to a case he had seen where the victim mewed like a cat and barked like a dog, tried to bite and snap at those near him, and finally died in great agony.

DR. BRASHEAR told of the many references to such cases in all of the ancient works of medical lore, but said he had never seen a case follow the bite of a dog and never expected to live long enough to see a true case of hydrophobia. He was very skeptical as to the existence of any such disease and believed the symptoms to be largely due to hysteria.

The discussion was continued by Drs. Humiston, Friedman, Baker, Herrick, Wooldridge, Sawyer, and others, none of whom had ever seen a true case of the disease. It was the prevalent opinion that the unusual fright attendant upon these cases, aggravated as it is by superstitions and public sentiment, is more to be dreaded than is the disease itself, which in this country is so rare that the oldest inhabitant pleads ignorance of facts pertaining to any well authenticated case.

DR. HUMISTON reported the successful removal of an ovarian cystoma, in which the tumor weighed 72 lbs., and the woman after its removal weighed but 85 lbs.

C. W. SMITH.

Correspondence.

CLEVELAND, O., Dec. 15, 1897.

Editor Cleveland Medical Gazette:

The recent attempt in this city to chloroform a sleeping man with the object of committing a burglary, again raises the question in the medical and lay mind as to whether a person in his ordinary state of sleep can, by means of an anesthetic, be brought into a state of narcosis without first awakening.

In the case referred to, the man, having been sleeping as usual at 2 A. M., was, according to his own account, aroused by his sense of smell, his first conscious thought being, "I was not using any of that liniment; what makes it smell so strong?" (Chloroform liniment had been occasionally used by himself and others in the house.) Next, his attention was caught by a whiffing noise, and turning his head he beheld by the dim light of the room Mr. Burglar spraying over his head with a hand atomizer. With a yell which aroused the lady of the house, who occupied the next room, and making at the same time a vigorous kick at the intruder, he jumped to his feet, while the burglar ran downstairs and escaped.

It certainly is an open question, as the instance cited will go to show, whether a person in a physiologic state of sleep can be brought under the influence of chloroform or ether. The many instances recorded in the secular press of houses being robbed while the inmates were "chloroformed" may be set down as good excuses for persons who slumber so profoundly that the dawn of the Fourth of July is not realized until the usual breakfast hour.

From a scientific standpoint there certainly is a good opportunity for experimentation along this line, and physicians connected with institutions in which a large number of persons sleep might be enabled to obtain results which would throw light on this much mooted question.

Judging from the diversity of opinion expressed during the discussion on the subject of puerperal septicemia at a recent meeting of the New York Academy of Medicine, it is quite evident that the positive source and most satisfactory management of this disease is by no means conclusively settled in the medical mind.

Pending the final adjustment of the pros and cons in the matter, it is safe to say that the physician who adopts the stereotyped procedure when attending a case of confinement, of rendering his hands strictly germ-free, and the patient's vulva and parturient canal as thoroughly antiseptic as possible, and in maintaining in the patient that condition throughout the entire puerperium, will have good reason to claim, as did the renowned sanitarian B. W. Richardson, that in *preventive* medicine there is much for humanity's good.

CARLISLE.

Notes and Comments.

The North Central Ohio Medical Society held a very interesting meeting at Mansfield on December 17th. With Dr. A. Rhu as president and Dr. J. Lillian McBride as secretary, the society continues a very active and useful existence.

It Is Now Time to be thinking about the next meeting of the Ohio State Medical Society. President Humiston has been exerting himself toward securing the affiliation of *all* the county societies in the state. This is in the right direction. Every county should have its medical society, and every county society should be represented in the state organization.

Dr. M. D. Stepp had a narrow escape from a serious accident on the evening of November 20th. In boarding the front end of a crowded street-car he slipped and fell beneath the step, receiving some ugly bruises, while the wheels passed dangerously near.

Dr. C. W. Smith has recently removed his residence from the Ellington to the Edvardus, on Handy street.

Foreign Bodies in the Ear. Dr. Charles H. Burnett, reporting a case of foreign body in the ear in the *Philadelphia Polyclinic*, concludes with the following: "A foreign body in the ear is a simple matter at first, and will remain a simple matter if the general physician will remember that the rule of safety is 'the syringe or nothing,' for the removal of an inanimate foreign substance from the ear. Dead insects can be syringed out, like any inanimate substance, after they are killed. So safe and efficient is the syringe in most cases, that the instruction given the general physician now, the world over, is 'use the syringe or let the foreign substance in the ear alone.' For any substance a child can put in its ear or let a companion put there, 'playing doctor,' as they often do, is accomplished without pain or irritation. Insoluble, inanimate substances can remain in the ear indefinitely without any harm. The most that can happen will be the formation of a wax plug about the foreign body as a nucleus. It can then be syringed out with the wax plug as in the case just narrated. Any other procedure is full of danger for the patient."

Dr. Henry A. Becker and Dr. Stewart have opened an office at the corner of Pearl street and Clark avenue.

Dr. H. E. Whitney (W. R. U. '88) has been appointed Surgeon for the Pennsylvania Railway Company at Ashtabula.

Another New Book on Clinical Diagnosis is announced for early publication by the Macmillan Company. The author is Dr. G. Klemperer, Professor at the University of Berlin. This will be the first American, from the seventh and last German edition. The translation is by Drs. Nathan E. Brill and Samuel M. Brickner, both attached to the staff of Mt. Sinai Hospital. The book is said to be an exquisite exponent of the German methods in clinical diagnosis.

Dr. Norman Kerr, of London, denies the statement often heard that "doctors' orders" are a frequent cause of inebriety. He has studied the subject and is able to trace such a cause in not more than one-half of one per cent.

Dr. Wm. Thos. Corlett read a paper on "The Recent Researches in Ringworm," followed by stereopticon illustrations, before the Buffalo Academy of Medicine, November 16th.

Auto-Skiascopy. Dr. Edward Jackson, at the October meeting of the Section on Ophthalmology, Philadelphia College of Physicians, explained a method of practising auto-skiascopy by the use of a looking-glass in addition to the usual apparatus for skiascopy, one eye being used to examine the refraction of the other. The distance of the observing eye from the image of the observed eye is of course double that of the eye from the glass.

For the plane mirror the light is brought close to the observing eye, and far enough to one side to leave the observed eye in the shadow of the nose. For the concave mirror the source of light should be placed at least one meter behind the looking-glass, far enough to one side to allow it to shine on the mirror in front of the observing eye, but so as to leave the observed eye in shadow. The two eyes having to take the different rôles of observing and observed proves somewhat puzzling at first; but with some experience in using the test the observed eye is of positive assistance in keeping the light properly directed, since it sees in the looking-glass the reflection of the mirror held before the observing eye. In auto-skiascopy the refraction is not measured at the fovea, but at a point somewhat to the temporal side of the macula.

The value of the method, both to gain familiarity with the shadow test and as a means of studying problems in physiologic optics, makes it well worth trying.

Appreciation. The work of the GAZETTE is best appreciated by discriminating writers and readers. The following is a specimen of the letters which we receive, to cheer the hearts of the editor and his collaborators. The epitome referred to appeared in "Among our Exchanges." Dr. David Williams writes: "I notice in the October number of the GAZETTE that you have kindly devoted a page to my operation on the rectum. I sincerely thank you for the wonderfully comprehensive and perfect epitome of my article. It is not often that the important points of a paper are held so exactly, and at the same time compressed into that amount of space."

Lakeside Hospital is to be Opened during the first week in January. The "opening exercises," to which the public will be invited, will be duly announced in the daily papers.

The Death of Dr. James H. Pooley, of Toledo, took place on December 11th, at the age of fifty-eight years. Dr. Pooley had been connected with medical-college work a large part of his life, having at different times taught in Dartmouth Medical College and in Starling Medical College, and was at the time of his death Professor of Surgery and Dean of the Faculty in Toledo Medical College.

The Treatment of Warty Growths of the Genitals. William S. Gottheil, in a paper on "Epithelioma of the Penis," read before the Society for Medical Progress, November 14, 1896, concludes as follows (*International Journal of Surgery*, January, 1897):

1. Warty growths of the genitals, more especially in the male, are always to be suspected of malignancy, no matter how innocent they seem.

2. They should either be left entirely alone, or be thoroughly removed by knife or cautery.

3. Imperfect attempts at destruction, as with nitrate of silver, carbolic acid, etc., are especially to be avoided, there being many cases recorded in which they have apparently stimulated a benign growth into malignant action.

The Proper Course. "In case of an accident, doctor—

a broken leg, for instance — what is best to be done while waiting for the physician?"

"Well," said the doctor, "I think the best thing to be done is to get his money ready for him."—*Puck*.

Dr. Oliver Wendell Holmes. An exceedingly interesting address, entitled "Reminiscences of Distinguished Physicians and Surgeons," was read by Dr. I. T. Dana before the Clinical Society of Portland, Me., and published in the *Journal of Medicine and Science*. The writer gives his personal recollections and impressions of James Jackson, John C. Warren, Jacob Bigelow, Oliver Wendell Holmes, John Ware, Alonzo Clark, Louis Velpeau, Charcot, Trousseau, Stokes and Graves, Wm. Warren Greene, as well as some well-known in this country today, notably S. Weir Mitchell, Welch, Osler, Jacobi, Billings, Sternberg, and others. We regret that space does not permit us to reproduce the address at length, but cannot forbear presenting his remarks upon Dr. Holmes:

"Dr. Oliver Wendell Holmes, anatomist, poet, critic in art and literature, and a master in anatomical demonstrations. He was a man of wonderful wit and sarcasm, and, at the same time, a man of most tender heart and sensibilities.

"He was very nervous. He never had a large practice, and soon gave up the profession to devote himself to literature.

"As a writer, it is difficult to name another author more deft in the handling of sarcasm and ridicule. His fame as a writer is by no means limited to his own country, and when he visited England he was, as is well known, the recipient of much honor and attention from the most cultivated people.

"In earlier life he was incisive and sarcastic in speech, but I have the impression that as age advanced he became gentle and specially thoughtful as to the feelings and rights of others. He fairly earned for himself the reputation of one of the ablest and wittiest literary men of the country.

"His sarcastic turn of mind and sharp, incisive style of speech, on one occasion at least, gave merriment and cheer to the enemies of rational medicine, when he said that 'if all medicine in the world were cast into the ocean it would be so much the better for men and so much the worse for the fishes.' He always disclaimed the least intention to slur rational medicine or the medical profes-

sion. It was at a time when the practice of medicine was undergoing needed reformation. Over-frequent and over-done medication was being replaced by treatment only in answer to rational indications. The regulation of food habits and environments was beginning to have due importance assigned to it, while the estimate of the value of drugs, *relatively considered*, was being largely reduced. Dr. Holmes, as he himself explained, had in mind all the abuses, as well as the intelligent uses of medicines. He never questioned the value of the intelligent use of rational medicine, and he believed in the educated physicians of his day, and always availed himself of their prescriptions when sick."

Dr. James F. Armstrong, of Cleveland, who had been in practice here for thirty years, died December 7th, at his residence, 377 Pearl street. He had not been in good health for some time, and had intended to leave the city several months ago to escape the severity of winter, but his condition became such that he could not undergo the fatigue of travel.

Failure to Report Deaths. On November 29th, Dr. J. H. Lowman and Dr. A. C. Buell were arrested for violation of the law, in failing to report deaths to the city health office. When the matter reached the court on the following day, Dr. Buell proved an alibi, while Dr. Lowman left the court-room with a pocketbook somewhat lightened.

Serum Diagnosis of Typhoid. Dr. Wyatt Johnston, Bacteriologist to the Board of Health of the Province of Quebec, who has had much to do with the development of a successful technique for the application of the Widal test, reports as follows on the present status of the matter, in a circular addressed to the president of the board under date of October 1st, given in the *Canada Medical Record*:

"The simple technique recommended by this laboratory for the serum diagnosis of typhoid, by means of dried blood, has been found, after a year's trial, quite satisfactory for the practical work of diagnosis.

At the same time (as was recently explained by a committee of the American Medical Association, of which I was a member), although for routine diagnostic work even the very simplest methods may give good practical results, yet for recording scientific observations quantitative methods should be selected. This is especially nec-

essary in reporting exceptional cases at variance with the general results of others, or where the observations are made the basis of generalizations.

I have found that good uniform quantitative results can be readily obtained with the dry-blood method by taking in the first instance drops of uniform size, collected by means of a wire loop (I use 20-gauge copper wire, 2 mm. inside diameter), which is returned with the outfit, and used subsequently to obtain dilutions of known strength. The method has been described more fully in a joint paper by myself and Dr. Harold Thomas before the British Medical Association at Montreal, on September 2, 1897.

For quantitative work, the blood is dried on an ordinary glass slide, or non-absorbent paper can be used if preferred. One of the outfits will be sent when a quantitative estimation is desired, or to any who are practically interested in the matter. As already stated, I do not find quantitative work necessary for routine diagnosis, preferring to employ cultures having a sensitiveness so low as to give no reaction at all with non-typhoid blood.

In addition to the previous observations made by myself and Dr. D. D. McTaggart as to the use of attenuated cultures, I wish further to call attention to the importance of paying special care to the reaction of the test culture media. Bouillon cultures showing after 24 hours' growth of typhoid at 37° C. a slight uniform cloudiness only, and quite free from scum or sediment, offer the greatest security against pseudo-reactions. I find that such cultures can be obtained by using bouillon just on the verge of litmus acidity, giving no blue whatever to the red paper. From 3 per cent. to 4 per cent. of normal alkali are required to make this bouillon neutral to phenol phthalein.

Cultures which give a heavy bouillon growth are the ones which are most liable to give pseudo-reactions, i. e., to clump in a deceptive manner spontaneously or with non-typhoid blood. If the culture is too acid the reaction may be defective. With a proper culture, I have never met with the typical reaction apart from typhoid fever. On the other hand, by employing certain incorrect methods of preparing the culture I can obtain at will very perplexing pseudo-reactions with a large proportion of non-typhoid bloods. This may be the explanation of a number of anomalous published results, though the difficulties can be also doubtless avoided by other means than those indicated here."

The Philadelphia Medical Journal. Something more than a year ago one of the leading medical book publishers of Philadelphia contemplated the publication of a new weekly medical journal, to be started at the beginning of the year, under the editorial control of Dr. George M. Gould. The plans failed of consummation at that time, but seem not to have been dropped completely, as apparently the same project now comes to view with a somewhat different and much improved setting. The Philadelphia Medical Publishing Company has been organized among the physicians of that city, with a capital stock of \$30,000, in ten-dollar shares. With the opening of the coming year the company will begin publication of the *Philadelphia Medical Journal*, with Dr. Gould as editor. Dr. Gould's widely recognized ability, together with the fact of the ownership and business control of the journal being vested in an organization of medical men, insures a first-class journal and a wide circulation.

Excision of the Tonsils. Dr. E. R. Larned, of Joliet, Ill., describes, in the *Journal of the American Medical Association*, his method of complete excision of the tonsils by the use of the cold wire snare, which he considers more satisfactory than partial removal by other methods. The instrument is a modification of the ordinary nasal snare, in which the wire tube is in a straight line with the square shank, to avoid the loss of power at the bend, and the sleeve to which the ends of the wire are attached is actuated by a quick-acting double-thread thumb-screw. These changes provide for the increased power required for use on the tonsils. The cases appropriate for the operation are those of hypertrophic tonsils subject to recurring attacks of acute inflammation.

In performing the operation, the patient, under complete anesthesia, is placed upon a table before a window or under a skylight affording a bright light, with the operator seated between the patient and the source of light so that his eyes will be directed away from the light. The patient is turned on his abdomen, with his face projecting over the side of the table towards the operator, the uppermost arm and the head being held by an assistant, and the jaws held apart by a Waxham gag. Back of the patient is held a mirror in such a position as to reflect the light from the window or skylight to the head-mirror of the operator, or if daylight is not available artificial light may be used. The undermost tonsil

is seized with forceps, the wire loop passed over the locked handles and made to encircle the gland completely, after separating it from the anterior pillar of the fauces, if necessary, by a blunt hook, and the loop tightened by turning the thumb-screw. In this way the gland may often be removed without the loss of a drop of blood. To remove the other tonsil the table and the patient are turned so as again to face the operator with the second tonsil undermost.

Treatment of Malaria. Dr. Robert S. McGeachy, of Raleigh, N. C., has found his method of treatment in malarial fevers very successful, after using it in a large number of cases, and he details the method in the *Charlotte Medical Journal* as follows: "On being called to see a patient who has been having chills, if he is suffering from severe headache, backache, and pain in the limbs, I prescribe

R—Caffein cit. gr. j.
Sodii bicarb. gr. vj.
Acetanilid ʒ j.

M. et ft. cap. No. iv. S.—One every two hours until relieved.

I never order more than four of these capsules, for they seldom have to take that many before relief is obtained, and if that number does not give relief it is useless to continue them. If calomel is indicated I order the following:

R—Calomel
Sodii bicarb. ʒʒ gr. vj.
M. et ft. cap. No. j. S.—Take at bedtime.

Then give

R—Quin. sulph. ʒ j.

Div. in cap. No. xij. S.—One at 6, 8, 10 and 12 each A. M. until all are taken.

After having taken the above, give the following as a tonic:

R—Liq. pot. arsen. ʒ iss.
Quin. sulph. gr. xvj
Tinct. ferri chlor. ʒij.
Glycerini ʒ ss.
Aquæ q. s. ad ʒ ij.—M.

S.—ʒj. three times a day after meals.

If the case has not been a severe one, two ounces of

tonic is sufficient; if severe, I order three or four ounces, according to indications."

Garbage Disposal. A contract for an extended period has recently been entered into between the city of Cleveland and a private company for the disposal of garbage, but it has not yet been decided what method of disposal will be employed. This has been left for the company, and the decision will of course rest on the matter of estimated expense.

In this connection the following extract from an editorial in the *Medical Record* may be of interest: "The committee appointed by the American Public Health Association define the word [garbage] as follows: 'By the term garbage is meant animal and vegetable waste matter subject to rapid decay, from kitchen, markets, slaughter-houses, etc., but not including night-soil and street sweepings.' The methods now in use for the disposal of garbage are one and all in a greater or less degree open to objections, but, from the immense amount of interest evinced in the matter, it may be with safety predicted that ere much time has passed a healthy and economical system will have been evolved. From the reports of the committee, collected from one hundred and fifty American cities, it seems that in forty-six of these, dumping on and plowing into land is the practice followed; dumping at sea or into a lake or large river is the plan pursued by fourteen large cities; feeding to animals in forty-three cities; reduction to grease and fertilizer in seventeen cities; cremation in thirty cities. The first three of these methods may be dismissed briefly: they are all very imperfect, while feeding to animals is positively dangerous. There are then left the reduction and cremation processes between which to choose. . . . Mr. Rudolph Her-ring, speaking of the reduction system, says: 'Reducing garbage to grease and fertilizer renders the mass of matter harmless, provided that the work is thoroughly done. It is found, however, that when this system is followed offensive odors are likely to pervade the neighborhood, and that the works will be looked upon as a public nuisance.' . . .

"The reduction process in this country commends itself on account of its supposed economical advantages as compared with cremation. In America the cost of garbage disposal by cremation varies from three to ten cents per capita. In Europe the cost of refuse destruction is

very slight. In some cases, in which the heat is used to generate steam power, there is said to be even a profit. The most interesting experiment in this direction is now being tried at Shoreditch, England, and is a practical application of the idea how to combine the destruction of refuse with the production of electric light. Of course it would be as yet premature to pass a decided opinion as to the result of this trial, but it is estimated that under the new methods the cost will be reduced by something like two-thirds.

"The conclusion arrived at by the majority of experts appears to be that the best system, from a sanitary point of view, is destruction by fire, that is to say, when the methods are efficiently carried out. The small and oftentimes questionable value of the refuse for fertilizing purposes should not be weighed in the scale against the greater value of improved sanitation."

In a New Place. An East End lady vouches for the truth of this little dialogue, which illustrates what queer misconceptions will sometimes possess the illiterate mind:

Mrs. B.: "Going to the city?"

Mrs. H.: "Yes, I have to hunt up a new servant."

Mrs. B.: "I thought you had a good one."

Mrs. H.: "I have, but she told me yesterday she should leave to-morrow, as she had Bright's disease in her teeth and it was worse in cold weather, and she knew she couldn't do the work for us this winter.—*Plain Dealer*."

What a Flannel Bandage may do. Dr. Preston Steele, of Titusville, Pa., writes to the *New York Medical Journal* regarding a case in which confinement had occurred, and everything had progressed favorably at first. He continues, "Twenty-four hours after delivery I received a telephone call to come at once. Upon my arrival I was told that blood poisoning had set in, and was shown a large, irregular-shaped spot upon the abdomen. The spot was of a dark bluish color, very sensitive to the touch, and measuring perhaps seven inches in diameter. The patient complained of terrible pain over the region of discoloration. The pulse and temperature were normal. Upon a close examination I discovered that she had used a flannel bandage with the maker's stamp on one end. The use of warm water and soap was followed by instantaneous and complete recovery."

THE
Cleveland Medical Gazette

JANUARY, 1898.

Original Articles.

**REPORT OF A CASE OF ERYSIPELAS FOLLOW-
ING CHILDBIRTH—WITH REMARKS ON
THE RELATION OF ERYSIPELAS
AND PUERPERAL FEVER.***

BY CHARLES GENTSCH, M. D., CLEVELAND.

Your president, in requesting me to submit a paper, very kindly suggested that it is the endeavor to bring before this society subjects for discussion which most concern and most try the general practitioner in his daily routine. In order to state some of the pertinent problems we must solve at the bedside, I may perhaps be led to trespass beyond proper measure upon your time and patience.

In no class of cases do we find in the present state of our knowledge more imponderable, indeterminate elements, which are or may become potent for thought and action, than those presented in the pregnant and the lying-in woman. I will endeavor to give you some of the more impressive features of a case of erysipelas, and what knowledge and consolation, or want of these, I have been able to obtain from medical literature. We constantly endeavor to obtain a more exact understanding of the nature of diseased conditions, and frequently

*Read before the Cuyahoga County Medical Society, Sept. 3, 1897.

some real advances become apparent to cheer our hopes; but they also enforce modesty in view of our limitations. Our text-books give us descriptions of classical forms of disease and suggest methods of treatment. Descriptions, however, can not include every manifestation of any single disease nor its behavior in any given case. The elements of personality and the physical life history of the patient we cannot predetermine. These will manifest themselves in some measure in the presence of disease and will often exercise a directing influence in our efforts to attain desired results. It is trite, therefore, to say that the same disease in different individuals will show some clearly defined and well recognized features, but will also at times show apparently eccentric tendencies. When we come to the handling of a case the patient may have prejudices and predilections that must be reckoned with. There may be idiosyncrasies that discover themselves in the exhibition of remedies. A physician under the stress of a supreme responsibility must unflinchingly,—he cannot always unerringly,—analyze and give just proportion to diverse and contradictory, as to harmonious elements. Meanwhile he must satisfy the keenest scrutiny which a bright and intelligent patient will give him, particularly if eccentricities in a form and course of disease conspicuously present themselves.

When he has balanced the attainable good with what he may do that is possible of evil, something still remains to chance. These reflections were emphasized in the case whose history is herewith recited.

Mrs. H., aet. 33, primipara, was confined without very unusual incident during the early morning of April 7. The head presented in the first position, and the first stage of labor was satisfactorily completed after three or four hours—the patient very nervous and overwrought. As some delay in progress now occurred, and there were apparent no contraindications, it was thought best to adjust forceps and hasten delivery. The forceps were easily adjusted and the traction made comparatively

little, and the child's life was probably maintained through the prompt use of the instrument. The cord was found coiled around each arm and passed across the back of the child. Some effort at resuscitation was necessary, the heart's action was feeble and intermittent, but presently the child cried lustily. A careful examination of the genitals and perineum of the mother revealed the usual laceration of the fourchette, but the labia and perineum were uninjured. The mother, although very nervous during the first stage, felt greatly relieved when instruments were suggested and bore their use with singular equanimity. For the two days following delivery, the mother's temperature and pulse remained normal, the tongue clean, and the appetite excellent, the excretions all normal, with an abundant supply of milk to satisfy a hungry baby, and I ceased my visits. A normal and excellent recovery seemed assured. Vaginal douches of a solution of Seiler's tablets twice daily during the first 24 hours and once daily thereafter were used.

On April 13, six days after delivery, I was recalled. For two days there had been no evacuation of the bowels; the lochia were normal in quantity; the most careful palpation of the abdomen externally revealed no tenderness; the tongue was furred, the temperature exceeded 104° , and the pulse was soft and compressible at 120-130. There was no tenderness, but a tendency to nausea and much mental depression; there was an anxious, pinched expression and dark lines about the eyes. A cathartic dose of calomel and compound jalap powder was administered, as also capsules containing bismuth, acetanilid, and quinin as a febrifuge and antiseptic, the thought being that there existed some form of autoinfection not yet clearly defined, but possibly finding a seat within the intestinal tract. The next day the temperature had dropped to 100° , but the pulse remained rapid and feeble, varying from 120 to 130, although the mental tone was somewhat improved. On the 15th, the temperature rose to 103° - 104° A. M. and P. M., the pulse remained the same. There had been some restless, uneasy sleep, with delirium. The

nausea continued, and there were small involuntary stools, with some mucus. The urine was dark, sufficient in quantity, loaded with urates, of sp. gr. 1.022, and without albumin or tube casts. Antiseptic enemata relieved somewhat the tendency to involuntary stools, which were very annoying, but the same general condition of pulse, temperature, and low nervous tone continued until the 18th, when a consultation was held with Dr. P., of Canton, Ohio, a relative of the family. At this time there was moderate tympanites, with pulse 120, temperature 104°, a normal lochial discharge without odor, and no abdominal tenderness. Dr. P. made a digital examination of the vaginal tract and os uteri and thought that the os was somewhat soft and perhaps lacerated and might be a seat of infection. There was no tenderness of the parts, no abnormal discharge, no odor. The possible infection of the part suggested free uterine douches with recurrent flow. Dr. P. suggested full dosage of quinin and salol guarded with bismuth, to combat nausea, and fuller doses than heretofore of codeia to produce rest and sleep. A uterine douche of 2 quarts of a solution of potassium permanganate, 1 grain to the ounce, was made through a speculum and a recurrent tube. The os showed separation of minor degree of some of its fibers, there was no notable tenderness, the secretion from the uterus appeared normal, the organ was well contracted to a depth of about 3½ inches, and involution was apparently progressing favorably this 12th day after delivery. Three uterine injections as above were made on successive days, without apparent effect upon pulse, temperature, nausea, or lochial discharge, the mental condition remaining greatly depressed. On the 19th some swelling of the left labium majus was observed, as though cellulitis were developing, although the laceration of the fourchette was apparently healing. The labium was covered with a poultice of powdered slippery elm and aqueous sublimate solution 1 to 6,000. On the 21st the pulse had dropped to 100°, was improved in quality, and the temperature was 102.4°. The cellulitis of the vulva had meanwhile extended downward and

backward around the anus and upward over the lower section of the sacrum. The abdominal tympanites had somewhat increased, although external bimanual manipulation of the abdominal viscera even to a point of rudeness revealed no tenderness. The stomach remained quite intolerant to quinin and salol. The extension of the cellulitis beyond the labium indicated most plainly streptococcus infection. As the cellulitis extended over the sacrum, blebs filled with sanguinolent fluid formed and broke, leaving abraded surfaces extending beneath the skin proper and resembling bed-sores in many ways, though not so deeply cupped. As the area of erysipelatous inflammation extended it was painted over with a solution of ichthyol in collodion, which formed a protective coat, relieved the tension and soreness, and apparently prevented further abrasions over areas of decubitic contact. The erysipelas extended finally over the entire body, reaching the top of the sternum in front and covering the cervical vertebræ behind, and downward encircled the entire surface of both thighs.

About May 2nd, the flood was over and evident improvement began. Four abscesses had developed,—one over the outer aspect of the right thigh, three over the trapezii muscles, one on the right and two on the left side—all located well beneath the skin and cellular tissue. That in the left trapezius was deep seated and was slow in heading and fluctuating. These abscesses had each a nuclear body similar to the "core" of a boil or a carbuncle. From the largest about two ounces of pus was evacuated upon incision. After the abscess cavities were thoroughly washed out with solutions of corrosive sublimate and hydrogen dioxid, these cores or sloughs were removed without much difficulty in masses of fairly well organized texture. After the removal of these masses the cavities lost all appearance of virulence. When the evidence of intolerance by the stomach of germicidal remedies could no longer be doubted, only tonics and digestive aids were addressed to the alimentary canal. On and after April 24th, 8 c.c. twice daily of Edson aseptolin were injected hypo-

dermically. Theoretically the use of aseptolin seemed indicated, the phenol it contains as a direct germicide and the pilocarpin as a stimulant to phagocytosis. The evidence of improvement in the patient from its use was not so marked as was expected and desired. In a future case I should feel tempted greatly to increase if not to double the dose, if I have any lesson to draw from my experience in this.

Current medical literature has brought into some prominence the use of Marmorek's anti-streptococcus serum. Having had no personal experience in its use, the counsel of Dr. Ohlmacher was requested and obtained on April 29. In a culture made from a scraping taken from the fourchette, Dr. Ohlmacher found a lively colony of the streptococcus pyogenes, the pathogenic bacterium of erysipelas, and no other pathogenic bacteria were found. Dr. Ohlmacher also made, subsequently, cultures from pus taken from the abscesses above mentioned and found therein only the streptococcus. On April 29th, the day of our consultation, the patient's pulse was feeble and varied from 96 to 110, the temperature was 103°; the patient was very much dejected, and the outlook, but for the lessened pulse rate, quite gloomy. Dr. O. stated that he had recently had an unusual number of streptococcus infections under observation, enough to suggest an epidemic. Dr. O. counselled that it would be difficult to obtain reliable Marmorek serum, and that, at best, its use was still in an experimental stage. The treatment was continued, of tonics and digestive ferments to the alimentary canal, and of injections of aseptolin twice daily. On May 3d the pulse was of good volume at 76, and the temperature had dropped to 97.4°. The aseptolin was therefore dropped and not again used. On May 4th the temperature declined to 96.4°, after which it gradually rose to normal, and convalescence was assured and continuous.

During the progress of the case, a sister attending Dr. P.'s wife had an attack of tonsillitis and pharyngitis indistinguishable, clinically, from the usual streptococcic

form, and which yielded promptly to vigorous antiseptic treatment. The husband of the patient also, who was troubled with a sty of one lid, was soon afflicted with blepharitis of both eyes, accompanied with a free discharge of pus. This also yielded very promptly to dusting the eyes with calomel. No cultures were made.

Mrs. H., the patient, had a decided attack of *la grippe* on January 26, 1897, with considerable throat trouble. She had, however, some time before her confinement, made a very fair recovery. On March 13th, 24 days before her labor, she came to my office suffering from cellulitis of the proximal phalanx of the ring finger of the left hand. The pain extended up the hand and arm, and the lymphatics were apparently involved. Before presenting herself she had industriously poulticed the finger, and it was ripe for operation. After free incision and dressing for a day or two with hydrogen dioxid a "core" was taken from the finger which macroscopically I could not differentiate from the cores found on the leg and over the shoulders of the patient after defervescence of the erysipelas. No culture of the finger infection was made. Knowing, however, what we do of streptococcus infection, it appears a fair inference that the attack upon the finger before confinement, the erysipelas after that event, the tonsilitis of Mrs. P., and the ophthalmia of Mr. H. had a common and sequential origin.

The orderly metabolic equilibrium; the absorption and assimilation of food, and the excretion of effete materials in due and equal balance is represented in the perfectly healthy adult. In youth, assimilation is slightly in excess; while in old age the system is somewhat overweighted with excretion. Faulty assimilation or indigestion in infancy and youth may cause convulsions. Bouchard affirms that pepsin in improper relation is a toxin. Imperfect elimination very often produces delirium and the typhoid condition in the aged, and frequently ushers in for them the closing scene. We know that emotion takes part in every act or process of the generative function, and some one has very aptly said that emotional affecta-

bility is the measure of convulsive liability. Emotional erethrism is the rule and cellular activity the necessity of normal gestation. Cellular activity may, nay, does it not often stand in a certain relation to emotional states, intense and prolonged? The maiden that "locks her secret in her breast and dies in travail unconfessed," may thus reveal, and most clearly, the intensity of her living agony, her nervous exhaustion and accompanying body innutrition. During the period of gestation and that of the puerperium it is most easy to disturb the harmonious relation between the destructive changes accompanying functional activity and the perfect assimilation necessary to the perpetuation of animal integrity. But a little disruptive change in this balance is required to cause the phenomenon of puerperal eclampsia. If it be granted that destructive metabolism is in excess in the puerperium, and if at the same time elimination from any cause be retarded, the system must become surcharged with toxic elements which are spread over the whole brain and nervous system. In the last periods of gestation, and in the puerperium, therefore, we have exactly those conditions that are liable to easy derangement and in which resistance to an active and persistent enemy is most easily overcome. This fact it is that gives the accoucheur and the general practitioner his greatest concern.

I have no desire to enter largely upon this subject, but merely to hint that conditions most fruitful of active mischief in the non-puerperal, become greatly increased in intensity and are far more difficult to combat successfully in puerperal patients. Statistics applied to puerperal states and their mortality offer a most confusing and unsatisfactory study. I have not studied them excepting that in a general way they prove very fully that the vital powers are lowered during gestation and in the puerperium, and that a greater mortality occurs during these periods from attacks of intercurrent diseases.

Dr. J. B. Herrick, of Chicago, reports (*Medical News*, June 19, 1897) a case of acute lymphatic leukemia with

streptococcus infection. The case resulted fatally, was not allowed to go to autopsy, but a quantity of blood was taken from the heart immediately after death, and experiments made with it confirmed the diagnosis, and blood taken from the finger two days before death showed streptococci. The question arose whether it was not a streptococcic disease with leukemic complications. In medical literature there still appears some disposition to believe that the streptococcus does not enter the blood or is not found, or cultures cannot be made from those circulating in the blood. If Dr. Herrick has observed and reported correctly that the streptococcus is found in the circulation, it may also be assumed that there is no tissue of the body which may not be subject to its invasion — no tissue wherein the streptococcus may not find a local habitation and give the ensuing diseased condition a name. Its presence appears to be generally demonstrable in septicemia, in meningitis, in pleuritis, in peritonitis; there are well authenticated cases of plegmon-erysipelatoid pneumonias; streptococci are usually associated with malignant or prolonged cases of measles, diphtheria, and scarlatina, and when either of the latter two diseases attacks the genitalia of the puerpera, the streptococcus is quite constantly present and acts no subordinate part in destructive changes. In oedema glottidis we have a visible and classical exhibition of erysipelas in a mucous membrane. I remember a case of this kind 14 or 15 years ago in a young lady upon whom tracheotomy became necessary, with apparently the most gratifying results from the operation. The voice and the respiration returned perfectly, but the heart entirely failed, and upon autopsy evidences of endocarditis were found — a result, we may now believe, of streptococcus infection.

A paper like this can suggest only the range and importance streptococcus infection, its pathogenic infection, would attain if properly considered.

It appears to be generally accepted by recent standard authorities that septicemia in the puerperium is due to a

few well known microbes that actively enter the tissues which they injure through their growth, and that, by their distribution throughout the body, they may so change the chemical processes and normal functions that death ensues. These microbes are almost exclusively streptococci, and are identical with those that cause wound diseases. Of far less importance are the staphylococci. These two varieties of microbes, giving rise to the so-called specific puerperal diseases, are therefore called pathogenic microbes, and differ from the so-called non-pathogenic microbes, that cause only putrefaction and non-specific puerperal disease. The infection starts in the vast majority of cases from the endometrium. Bumm distinguishes the difference between septic and putrid endometritis, but admits that the two forms are sometimes blended. In *putrid* endometritis there is found in the uterus a superficial layer of necrotic tissue, under which is a layer of granulation tissue, filled with leukocytes, the formerly much maligned colorless blood-corpuscles, that have, since the advent of bacteriological studies, proved to be our truest friends, forming a body-guard against invading microbes, which their minute bodies engulf and absorb. These phagocytes or devouring cells are giant killers on a small scale. While the microbiotic layer is covered with all kinds of saprophytic bacilli and cocci, these never enter the granulation layer. I take all this from the latest texts as the teaching of the present, and I turn with admiring gratitude to Billroth, whose instruction guided the earliest years of my professional life. I cannot refrain from quoting from his Surgical Pathology. The clearest and most profound concept of life must remain partial and inexact because no human mind can grasp in just proportion all the data that pertain to life. Billroth gave us 25 years ago, however, the "ascertained sequence of events" of the subject we are now considering, and our present knowledge is but a widening of the horizon he opened to our view.

Billroth's Surgical Pathology (1872), p. 157: "The reason why decomposing matters act so injuriously on

fresh wounds, and so slightly on granulating ones, I consider to be that they are chiefly absorbed by the lymphatic vessels. If you inject a dram of putrid fluid into the subcutaneous cellular tissue of a dog, the result will be inflammation fever and septicemia. If you make a large granulating surface on a dog and dress it daily with charpie soaked in putrid fluid, it will have no decided effect. On the borders of the inflammatory new formation the lymphatic vessels are closed; on the granulating surface there are no open lymphatic vessels, hence no re-absorption takes place there. Putrid matters act as ferments on other organic combinations, especially on fluids containing them; they induce progressive decomposition. But in most cases cell action occurs so quickly on the border of the living tissue, that a sort of living wall is formed; this new formation does not readily permit the passage of putrid matter, and the granulation surface, if once formed, is particularly resistant to such influences."

There may be septic endometritis according to its being a local affection, or there may be a local inflammation followed by general infection. In local septic endometritis, the endometrium is much like that in putrid endometritis, except that, besides more or less germs of putrifaction, streptococci are found. I have been unable to obtain a definition of phlegmonous erysipelas as distinguished from the ordinary type, excepting what may be implied from what follows by Garrigues on Puerperal Infection: "Most important of all seem to be the different degrees of virulence of the microbes themselves. Virulence is the property of the protoplasm which shows itself in energetic proliferation and increased power of resisting the influence of the cells in the organism invaded. This virulence is diminished by artificial culture, and is increased in the animal body, but in what way is unknown. The virulent streptococcus rapidly invades the tissues."

I am not a bacteriologist, and assume that there are some here like myself who have never made a culture.

We are, nevertheless, intensely interested in every advance made and in every aid given us by those who give their time and thought this direction. It is well worth while, for the purposes of this paper, *i. e.*, a free discussion, to give the views of different observers. Menge and Krönig (*Am. Jour. Med. Sc.*, June, 1897) have recently published a volume on the "Bacteriology of the Genital Tract in Woman." A review of this volume demonstrates that the normal puerperal uterus is free from bacteria. In 19 per cent of the puerperal women who had fever, streptococci were present. The exact method of infection in many cases is hard to determine. They suggest that it is possible that bacteria endogenous to the skin may cause puerperal infection, if conveyed to the genital tract. Indeed, we have exact observation showing the existence of streptococci in the air.

Romme states that the virulence of the vaginal streptococcus in a healthy pregnant subject is equal to that of the streptococcus of other mucosæ; in other words, it is not virulent at all, and acts as a saprophyte on healthy tissues. But when the resistance of the tissues is diminished in the vagina, as in the intestine, the streptococcus can act as a parasite, and be as virulent as the special germ of the same genus that causes puerperal sepsis. Hence he says that routine injections are deleterious in normal labor in which delivery has not involved traumatism of the tissues, and digital examination is to be avoided as far as possible, as vaginal streptococci might be introduced into the previously aseptic, but naturally lacerated tissues of the uterus. On the contrary, vigorous disinfection of the vagina is indicated whenever exploration or operative intervention has to be carried above the level of the os externum, and in all abnormal labors; it is also needed when the patient has an affection that diminishes the resistance of the tissues, as nephritis, cardiac disease without compensatory hypertrophy, syphilis, diabetes, intercurrent infectious maladies, and anemia. Nay, is it not best to do it under all circumstances? Disinfection is not done at all if not done

properly—and why should there be taken the risks of delay?

I am aware that the widest differences in theory and practice on the propriety of vaginal and uterine injections exists in the largest hospitals and among the medical profession of this city. Saft, of Breslau (*Am. Jour. Med. Sc.*, April, 1897), would entirely omit disinfection of the internal genital organs even in cases where infection may occur. Cullingworth in his presidential address before the Obstetric Society, London (*Am. Jour. Med. Sc.*, May, 1897), notes the fact that the mortality from puerperal septicemic infection in 1895 was the same as in 1864 and in 1849 in England and Wales—the mortality in the city of London having considerably lessened, while in the provinces it increased. He blames this condition upon the careless and indolent use of antiseptics, of which the hurried practitioner is often guilty, and urges the scrupulous practice of antiseptic precautions. The American editor believes a similar condition exists in America.

Dolérís points to the established fact that the bacilli of infection may be temporarily innocuous until some incident arouses their former virulence; thus it comes that an infection that has been latent for weeks, or months, flares up with surprising intensity. We have cases of mild puerperal infection that during the puerperium give either very slight or no symptoms at all. Weeks later, owing to some influence unknown, the latent bacteria are again aroused to activity and produce serious symptoms of puerperal infection. The treatment of delayed puerperal infection must be in accord with antiseptic principles.

But my case was one of clean-cut erysipelas—its behavior characteristic, its progress typical when once the march began. A culture is made from the genital tract and a streptococcus is obtained not to be distinguished in its culture media from that of puerperal sepsis. Sternberg and Osler and Welch affirm that the track of the microbes of erysipelas lies in the course of the lymphat-

ics. It is entirely probable that in my case there was separation of fibers in the uterine neck, the uterine vessels were discharging, and there was apparently no cause of resistance to a septic invasion greater in the direction of the uterus than in the route that was followed. The enemy marched outward beneath a canopy of cutaneous and subcutaneous tissue, lighting up new fires with each day's progress. There is abundant evidence that facial erysipelas may run its usual course without attacking the genitalia, without even invading external wounds about the person of the puerpera.

A curious side-light is thrown upon the study of streptococcus infection by the use of Marmorek's serum. Méry (Gould's Year Book, 1897, p. 468) found in the blood of a scarlatinous child a streptococcus upon which Marmorek's serum had absolutely no effect. As it has been shown that two streptococcus diseases exist in the horse, one of which is absolutely refractory to the action of Marmorek's serum, while the other is prevented by a small dose of this agent, the conclusion becomes almost irresistible that the streptococcus complications of scarlatina are due to a special variety of the organism, altogether different from the streptococcus of erysipelas, and against which the serum of Marmorek is powerless.

In the same direction are the observations of Coley, who supplies the article to the Supplement to Wood's Reference Hand-Book on the Curative Treatment of Sarcoma and Carcinoma by Erysipelas. He says: "I have endeavored to ascertain as far as possible the actual mortality of uncomplicated erysipelas. Nearly everything that has been written upon the subject is of little value in determining the point, because the term erysipelas has been used in a very loose way, including many cases of cellulitis and septic infection. I do not believe in the identity of the streptococcus of erysipelas and the streptococcus pyogenes, although I am aware that the opposite opinion is held by many of the leading bacteriologists. Those who hold to the identity of the two germs base their opinion largely upon the close resemblance morpho-

logically and biologically, and they claim that the clinical differences are due to the different sites of infection and variations of virulence in cultures; that the same germ in the outer layers of the skin will produce true erysipelas, that injected deeply into the tissues it will cause cellulitis and multiple abscesses. I believe this explanation entirely theoretical and not supported by the facts. During the course of these experiments (the cure of sarcoma, etc.), I have injected upward of one hundred and fifty times pure cultures of the streptococcus of erysipelas, of almost every degree of virulence, into the human tissues superficially and deeply. In but two cases did I see an abscess, and in one of them a careful bacteriological examination was made of the pus, before it had become contaminated, and mixed cultures were found, the staphylococcus aureus being present with the streptococcus. It may be worthy to note here that he concludes that the curative action of erysipelas (for sarcoma and carcinoma) is systemic as well as local, and probably due chiefly to the toxic products of the streptococcus, which products may be isolated and used without producing erysipelas.

In the case of Mrs. H., I got no report from Dr. Ohlmacher of any streptococcus but that of erysipelas.

MANAGEMENT OF PRECOCIOUS CHILDREN.*

• BY CHARLES F. DUTTON, M. D.,

Professor of Medicine and Clinical Medicine, Cleveland College of Physicians and Surgeons.

The term precocious is here used in its ordinary sense. It is not easy to draw a definite line between precocity and usual mental capacity. It is like the boundary between disease and health. It is used to represent a mental capacity beyond what is expected of children at given ages. Children having such capacity are said to be precocious; intellectually brighter than the average. This

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capacity may show itself in wonderful ability in a single direction only. We find among children, for example, musical prodigies, who in other things are not superior to their playmates. The same is true of children who show a marvelous comprehension of numbers. We have child poets, child artists, sculptors, soldiers, even. These are endowed from birth with mental powers in various lines which under favorable circumstances, sometimes even under adverse, develop into genius. They may be possessed of a combination of two or more of these special natural gifts and become renowned along more than one line. Other children are blessed by natural endowment with superior mental capacity in all directions. They have more than genius, they have talent. They may become philosophers, statesmen, scientists, historians, and the like, with an ease and speed which cannot be comprehended by the average intellect. What of mental work is mere mental gymnastics to them, is beyond the attainment of others of corresponding age. They see more quickly, hear more quickly, and comprehend more readily than others. There are all gradations of mental capability from those just above the average to one who may become in music a Jenny Lind, charming the world with her melodies; or in painting and art a Murillo, or a Michael Angelo; in mathematics, a Newton; in philosophy, a Bacon; in all things, a Shakspeare.

Those who have attained remarkable distinction in any of the fields of intellectual labor have sometimes accomplished it by energy and industry, having had little genius or talent to begin with. But most great men and women have shown unmistakable signs of superior intellectual strength in early childhood. Of musicians, artists, poets, scientists, scholars, philosophers, more than two-thirds were precocious when children. And even those who have attained to any greatness by energy and industry have shown in childhood precociousness in ability to be energetic and industrious. It has uniformly been assumed, but never proven, that precocious children die early. There never was a more fallacious statement. It

is no more true than that idiots die early. It is also assumed that the exercise of the intellectual faculties tends to physical inability and bodily infirmity. This is not true. A Humboldt, a Gladstone, our modern scholar and historian, Fisk, and hosts of others testify to the contrary. It is true that some children born with rickety and other fatal physical defects are precocious; but they do not die because they are precocious, but because they are feeble in body to begin with. I believe, if the facts could be brought out fully, we should find that the brightest children, other conditions being equal, live longest. So remarkable is the case of Mr. Fisk, and so well known to us all, that I cannot forbear giving a little of his child life. At seven he was reading Cæsar and had previously read Rollin, Josephus, and Goldsmith's Greece. Before he was eight he had read the whole of Shakspeare, a good deal of Milton, Bunyan, and Pope. He began Greek at nine. By eleven he had read Gibbon, Robertson, and Prescott, and most of Froissart, and from memory had written a chronological table from B. C. 1000 to A. D. 1820, covering 2,820 years, filling a quarto blank book of 60 pages. At 13 he had read the whole of Virgil, Horace, Tacitus, Sallust, and Suetonius, and much of Livy, Cicero, Ovid, Catullus, and Juvenal. In the meantime he had gone through Euclid, plane and spherical trigonometry, surveying and navigation, and analytic geometry, and was well into the differential calculus. He averaged twelve hours' study daily twelve months in the year before he was sixteen, and afterward nearly fifteen hours, working with persistent energy, yet he maintained the most robust health and entered with enthusiasm into outdoor life. He is now, at the age of 55 years, working as vigorously as ever, and is a much finer physical specimen than are most men of his age. To be sure, his is an exceptional case, but his case with hundreds of others whose history it would be interesting to follow, did the limited time for this paper permit, are exceptional only because they were exceptionally precocious. There are no tables of mortality to show that either the good or the brilliant

die early. On the contrary, any one who will take the trouble to investigate will find overwhelming evidence that "the law of the survival of the fittest" is applicable here as elsewhere. The idea that smart children are liable to early death from mental over-exertion is simply traditional. It may have had its origin in the fact that in families of several children the child least physically endowed has been the one chosen to be educated for some profession, while the cultivation, on this account, of his physical powers has been almost wholly neglected. I submit the question whether it is fair because such children break down early to draw from this the general conclusion that mental work is not compatible with physical vigor and unusual mental capacity, and that our precocious children must be kept back and compelled to keep pace alongside of their less brilliant companions. What, then, is to be done for the children who are precocious, who are beyond the average in mental capacity? I answer, first keep them busy. Measure their power to go ahead mentally as well as physically by their own standard, *i. e.*, give them work to do as difficult to accomplish as you would give to the average, if that average were made up of children all of whom were equal to them in mental capacity. As to physical training, all children, whether bright or stupid or of average capacity, should be trained in ways which conduce to physical vigor, and should be occupied mentally in such way as will best contribute to their intellectual development. Courses of study ought not to be arranged on the simple basis of time, whether for primary or more advanced pupils. It may be necessary for the general good that a course for the average pupils shall be measured by a definite number of years. My own belief is, however, that much time is lost to the more talented children as well as to older students—yes, not only lost but absolutely wasted, by adherence to the ordinary plan of requiring them to remain a fixed period of time in any grade. If, however, a time grade is necessary, let it be so elastic that a pupil who is competent to do the required work of a given time in half that time

shall have the opportunity to do it in half that time. Where is the sense in requiring a student of any age in any educational institution to be four or eight years doing work which he can easily do in two or four years. Parents are often slow to measure the capacity of their children, and teachers do not always discern the difference between the average and the precocious. Even doctors who ought to know better advise parents to keep their bright children back lest they overstudy and so injure themselves. They say, don't push your children ahead. They will break down early if you do. This is bad advice. Precocious children don't get pushed. They don't need it. They will do all that is required of them without pushing, at least without mental strain or friction. And what they do in the line of study without mental strain cannot hurt them. Don't cramp a child's mind by insisting that he must technically go over with his class all the details of a given course. Some children can begin in the middle of a course and come out at the end of it all right. Let a child have room for the full exercise of his mental powers. Let him leap from the first to the third year of his grade. He will be the wiser and better scholar for it if he has superior mental ability. It should be the purpose of parent and teacher to detect early the genius or native talent of a child committed to his care, and to cultivate the child in the direction of his talent. Give him enough during his study hours to keep his mind occupied. If he has more mind than the average he can do more work than the average, and without worry. If one does not plan extra work for him he will plan it for himself, and he may not plan wisely. Many a child has found school uncongenial, not because tasks were too hard, but because they were too easy. Many have become tired of study or of the class room because the class room did not satisfy the measure of their ability. In the majority of instances, I am informed that the pupils of our public schools who have entered Harvard College and other Eastern schools and there graduated with honor, several of them having won high prizes, are pupils who

went through the several grades of our school course in much less than the allotted time. And their studies did not prove injurious to health or physical vigor. I may say, in closing, that the precocious child should not, as a rule, be restrained in his mental progress. He should be well directed and his physical development be cared for at the same time. The doctor should not attribute every case of ill health in children to mental overwork, and at once impress the parent that his child's nervousness or other ailment is due to mental labor, but should seek the true cause, which more often may be found in connection with lax and vicious domestic or society arrangements than in the ordinary requirements of the school room. It is easy to say, take your child out of school. It is not always easy to say, look after your child at home, correct his bad habits, and see that when out of school as well as in he is judiciously cared for. It is an obligation the fulfillment of which the child has a right to demand, that those who have the planning of his future give him every possible opportunity for the development of all his faculties, and most in the direction of his natural endowments.

DISCUSSION.

THE PRESIDENT, DR. KELLEY: I think you all agree with me that this paper is not only suggestive, but I may say revolutionary. It is entirely different from what we have been reading pretty much all our lives and have heard argued ever since we went to school.

DR. L. K. BAKER, Cleveland: Since I am very much interested in the education of children along all lines, I would like to make one observation. In visiting several hundred rooms here in the city, we see in nearly every room in the sixth, seventh, and eighth grade several comparatively small boys and girls—diminutive compared with the others. Now I think if you would observe the appearance, the complexion, and general get-up of those smaller students you would agree with me and with Dr. Dutton that as a rule they are not unhealthy-looking stu-

dents. Of course they are the ones who are from one to three years ahead of their age in the grades, and they get there simply by dint of this precocity of which we speak. I think the doctor is correct in his conclusion that the majority of these youngsters who are from one to three years ahead of their grade are not broken-down, worn-out looking children. They are fully as healthy looking as are the others in the same grade.

DR. L. WOODRUFF, Alton: In my paper, which I perhaps shall have the pleasure of reading, I discuss this subject in a paragraph or two. What I want to say in reference to the paper to-night is this: Precocious children are urged forward to overwork because they are precocious. It is a very great mistake. I have known children who were urged forward and, I think, injured thereby.

DR. ORWIG, Cleveland: It seems to me, Mr. President, that it is not so much these precocious children who are injured as those who are simply ambitious and not precocious. They are the ones that injure their health by overstudy. They are the ones we ought to hold back, and that is always my advice to parents. If the child is bright, let it go; but when they have a child that is not overly bright but is overly ambitious, that is the one to watch. They spend their play hours in study, perhaps get up early in the morning and lose their sleep. This is more apt to be the case with girls. Boys are not apt to be so ambitious. They have an ambition to keep up with their class, doing more than they are really able. I believe these are the cases that ought to be held back, not the precocious children. Let them go ahead; they usually learn so easily they do not have to tax their minds too much.

THE PRESIDENT: I would like to ask Dr. Dutton what he thinks becomes of the bright boys in colleges—the grade-makers and prize-takers. Very few of them are ever heard of in after life. It is often argued from this that there has been overstrain. They are often very bright students. Possibly some of them will come under

the class of which Dr. Orwig speaks, the over-ambitious rather than the over-bright. But often they make a brilliant showing at college, and that is the end of them.

DR. DARBY, Columbus: I quite agree with my brother at the far end of the table [Orwig] in the matter of allowing the precocious to forge ahead, and also with the essayist in that respect. I think it is the mediocre that gets the worst end of the bargain. Seven years as a teacher and twenty-one years as a practitioner has pretty well grounded that remark.

DR. DUTTON: In the first place, let it be remembered we are not discussing the stupid ones. We are discussing what ought to be done with precocious children. So I do not make any allusion to that in my paper.

In answer to the question of Dr. Kelley, Are the brightest students in our colleges heard of afterwards? I answer, No! Because the young man of most ability in the college will never seek a prize. He has not time. The best graduates are never those who give their time to seeking prizes. A boy said to one of the professors at Case School: "What do I care for your marks? I'm after knowledge."

Let it be borne in mind that prize students are generally poor students. While their marks stand high their intellects are not expanded. This has been my experience and observation. If I see a student that is present at every recitation, because he does not like to be absent; if I see a student who commits the book to memory and can recite all the way through like a parrot, I put him down as a dolt. Rather give me a rascal, one who will run away from school.

I want to lay a little stress upon this. It is a common thing in the city of Cleveland for a doctor to say to the parents, "You must take your child right out of school." And there are children who cannot bear to go up and down one or two pairs of stairs in the schools. Were it not discourteous I could give you the names of a number of physicians in this city who uniformly, when a child makes complaint, give the advice, "You must

take your child right out of school." The next night the child is allowed to be out until eleven or twelve o'clock. The girl has her beau. She can sit on the cold door-step for an hour after she ought to be in bed.

Now, gentlemen, as conservators of public health it is our business to wake up to this matter, and to sustain the right side and not allow a doctor to pander to what parents are mighty glad to hear—that their daughters should be excused from school for fear the gynecologists will get hold of them next week if they do not. The whole thing is ridiculous and does not accord with truth. I find the bright-minded, big-headed, precocious children do not need any pushing on. You cannot hurt them. You may perhaps have to direct them in the right line, or they will push in directions that will not be profitable to them afterwards; but as for hurting their intellects, I would smile to see a good healthy precocious child that can be hurt by any study that is required of him in any institution that we know of.

SOME MALFORMATIONS OF THE HEART AND AORTA.

BY MARTIN FRIEDRICH, M. D., CLEVELAND.

I shall only mention those cardiac and aortic malformations which are of interest to the clinician, which give rather characteristic symptoms, and tempt the skill of the diagnostician.

OPEN FORAMEN OVALE.

It is not rare that the foramen ovale persists after birth, but as long as the rest of the heart remains normal there are no symptoms from it, and the defect cannot be diagnosed. The old theory that it gives rise to great cyanosis has been dropped long ago, since many cases found on the post-mortem table had not caused the slightest cyanosis *intra vitam*. The so-called blue disease of infants (*morbus cœruleus*) which formerly was attrib-

uted to an inefficiency of the heart, is now thought to be due to an insufficiency of the lungs, to a peculiar incapacity of the epithelium of the air vesicles to serve for the transmission of gases—a theory that needs proving.

When a patient with a patent foramen ovale acquires a mitral insufficiency, the blood pressure in the left ventricle is greatly raised, and the blood is forced through the open foramen into the right ventricle and into the venous trunk, so that we may get the symptomatology of tricuspid insufficiency in toto, without the latter being present.

In the well-known case of Reich there had been a tremendous positive pulse of the veins of the neck, a symptom so far considered pathognomonic of tricuspid insufficiency, and, as mitral insufficiency is the frequent cause of a relative insufficiency of the tricuspid valves, we see at a glance what a dangerous trap there is set for an unsuspecting diagnostician who hardly dreamed that he had to exclude a patent foramen ovale before he positively could say tricuspid insufficiency. The differentiation has nowhere been pointed out so far as I know, and must be difficult, if not impossible, in most cases. One might think of the following: In tricuspid insufficiency we get a systolic murmur and thrill loudest and only palpable in the fourth or fifth interspace to the right of the sternum. In a patent foramen ovale we should get a murmur and thrill over the base of the heart, and both would be presystolic. In the former the second pulmonary sound would not be accentuated, in the latter it might be, always supposing, of course, that there coexists a mitral insufficiency along with it.

The history and progress of the case might also give us some clue to the lesion. A relative insufficiency of the tricuspid would only be caused by a mitral insufficiency in an advanced stage during the time of broken compensation, while an open foramen ovale would always be there, even during the time of complete compensation.

DEFECT OF THE SEPTUM VENTRICULORUM.

This defect, which might be acquired as well as congenital, had always been considered as above the diagnostician's reach, until Potain, in his "*Clinique médicale de la Charité*," published its symptomatology. It is simple, but needs verification from other observers. All that we get, according to Professor Potain, is a tremendous systolic murmur with accompanying thrill at the third interspace to the left of the sternum. The murmur seems to be quite superficial, propagated in the third interspace towards the left, also on the opposite side, it is high in pitch and sounds with a startling loudness and roughness into the ear of the listener. Once heard it is never forgotten. The only heart with a supposed defect in the ventricular wall that I ever listened to gave a frightful murmur which covered all other sounds completely, but in spite of its intensity could not be traced far. It was distinctly localized in the third interspace to the left of the sternum and only feebly heard on the right side. The patient was a woman of some seventy years of age and did not seem any the worse for the tremendous noise her heart made at every contraction. And herein lies the special importance for the physician to recognize this lesion—it gives a rather good prognosis.

PERSISTENCE OF THE DUCTUS BOTALLI.

If the ductus arteriosus is not closed after birth, the blood will flow from the aorta into the pulmonary system, causing a dilatation of the pulmonary artery, an overdistention of the capillaries of the lungs with blood, a decided accentuation of the second pulmonary sound, and a dilatation and hypertrophy of the right ventricle. The pulsation of the pulmonary artery may be visible, it is always palpable. Its dilatation causes, as Gerhardt has pointed out, a narrow band of dullness along the left side of the sternum, reaching up to the second cartilage. Over it can be heard a systolic murmur, and a systolic thrill can be felt.

Insufficiency of the pulmonary valves causes similar

symptoms, but the murmur and thrill are diastolic; then inspiration is interrupted with every systole of the heart, presumably on account of a capillary pulse produced by this lesion in the lungs, just as by aortic insufficiency a capillary pulse is produced peripherally. The capillaries, by their sudden swelling, shut or at least narrow the lumen of the alveoli, hence the interruption of inspiration. Gerhardt has also pointed out that by listening to the lungs a systolic tone can be heard over the branches of the pulmonary artery. Lastly, some authors claim that the murmur produced by pulmonary insufficiency cannot be heard over the carotis. This is not true. Theoretically we should not expect it, but reliable observers have found it repeatedly. It is simply a case of transference of sounds.

The following might be taken into consideration: If in insufficiency of the pulmonary valves the produced diastolic murmur is transferred to the aortic system, it is heard over both carotid arteries, louder over the right; in persistence of the ductus Botalli, the murmur produced by the flow of blood from the aorta into the pulmonary artery is only heard over the left carotid and left subclavian.

In pulmonary stenosis we get, paradoxically enough, a dilatation of the pulmonary artery. Why that is, we do not know, but where facts are wanting a theory always comes in due time, so C. Paul thinks that, the blood not being forced into the pulmonary artery with sufficient strength, the artery is neither mechanically distended, nor does it recoil, and its wall loses its contractility and elasticity by sheer inaction.

The stenosis causes a systolic murmur as a patent arterial duct. This murmur is also sometimes transferred to the aortic system and heard over both carotid arteries. Here we have the same point for differentiation as in insufficiency of the pulmonary valves. Besides, in pulmonary stenosis the second pulmonary sound is very feeble, while it is decidedly accentuated with a patent ductus Botalli. German observers also say that the former causes more cyanosis than the latter. This the French deny.

It is a hard task to make out the existence of a patent arterial duct and to differentiate it from pulmonary stenosis and insufficiency; still the diagnosis ought to be always attempted, on account of the rather favorable prognosis of the former, and the very unfavorable prognosis of the latter lesions. Pulmonary stenosis and insufficiency both cause ischemia of the lungs, ischemia of the lungs predisposes to tubercular infection, and the infection once established proves fatal in a short time. The bacillus finds an excellent soil in the anemic tissue, forming colony after colony; the lesions undergo caseous degeneration, cavities are formed; there is no reaction from the side of the lungs, no attempt at defense against the intruder; no treatment does any good, no remedy avails, the patient is doomed to die and to die in a short time.

Quite the contrary happens, as far as tubercle bacillus is concerned, when the ductus Botalli remains patent. There we have hyperemia of the lungs, all the capillaries are overfilled, the tissue is congested. This immunizes the lungs against tuberculosis. In Vienna they go even so far as to say that when a patient with tuberculosis pulmonum acquires a mitral insufficiency which causes congestion of the lungs, that a conservative process sets in at once. The lung lesions undergo fibrous transformation, the colonies of bacilli are fenced in with connective tissue, the growth is made harmless or even extinguished. This is the good side of polmonic congestion; of course, I do not need to point out its dangers.

PERSISTENCE OF THE ISTHMUS AORTÆ.

This anomaly is easily diagnosed, on account of the tremendous circulation above and the small, hardly perceptible pulse below. The two carotid arteries are greatly distended and pulsate visibly. So are the subclavian, axillary, cubital, and radial. The femoral, popliteal, posterior tibial, and dorsales pedis are not well filled. The pulse wave reaches the radial before it appears in the femoral. This is very characteristic.

The heart is hypertrophied and beats forcibly. Be-

sides, a collateral circulation is developed which can be seen and traced on the living. There is an anastomosis between the subclavian and external iliac through the internal mammary, superior and inferior epigastric; between the subclavian and thoracic aorta through the superior intercostal, anterior and posterior intercostal arteries; and, thirdly, a second anastomosis between the subclavian and thoracic aorta through the thyroid axis, transversa colli, posterior scapular, and posterior intercostal. Over the internal mammary a systolic murmur can be heard on auscultation, and a thrill felt on palpation. The posterior scapular can easily be traced on the inner border of the scapula.

ANGUSTIA AORTÆ CONGENITALIS.

Not a few cases of congenital small aorta have been reported, but the diagnosis was oftener made on the post-mortem table than *intra vitam*, and although many a case has been attentively studied and every symptom carefully noted down, we are not able yet positively to recognize this malformation when present. We need more observation, more study of so important a subject, so as to enable us to make a positive diagnosis, a diagnosis which interests physician and surgeon alike. Such patients have no vital power in reserve. If afflicted with an infectious disease, they usually die. They faint from small causes. They cannot withstand shock, and ought never be put under narcosis, as the probabilities are that they will succumb on the table. In short, they behave very much like patients with lymphatic diathesis.

The heart gives us no certain symptom. The left ventricle is usually hypertrophied. The arteries are small but well filled and tense. The pulsation of the aorta cannot be felt in the suprasternal notch, according to Orthner, who lays great stress upon this symptom, but it may be present without a small aorta. More importance might be given to another symptom he mentions, viz., that such patients have always a subnormal temperature. They are pale and cold. The temperature does

not, even during an infectious disease, come up to the fever norm.

After puberty we get a symptom which so far has been generally noticed, viz., that with a full set of hair on the scalp, there is an almost absolute lack of the crinis pubis. In women we usually have an infantile uterus and undeveloped mammæ.

Undergrowth is positively no symptom. I saw, in Vienna, a young man 26 years old, almost six feet tall, well developed and muscular, who had succumbed on the table under the influence of a narcosis. The doctor intended to remove a small scar, the result of a burn. The autopsy showed an aorta about the size of an innominate. The scalp was well covered with hair, but there was no sign of a hair on the face, nor in the axilla, nor over the pubes.

THE DOCTOR'S NEW-YEAR RESOLUTIONS.*

BY S. W. KELLEY, M. D.

The doctor sat long in his office chair.
His brow was furrowed with thought and with care,
And silver besprinkled his thinning hair.

'Twas the last sad day of the dying year.
'Twas the last sad hour of the dying day.
And the doctor sat with his ledger near,
And a pile of bills which he could not pay.
His ledger was full of accounts unpaid.
“ 'Twas the same last New Year,” the doctor said.
“ I wonder how long is this thing to last.
See the work I've done in the busy past.
If I only had what is due to me,
I could settle my bills quite readily.”

Then the doctor squirmed in his office chair,
And his brow grew darker with thought and care,
And his fingers ran through his thinning hair.

*Recited before The Cleveland Medical Society.

Then he conned the book and his pencil flew,
As he figured the bills long overdue,
While he talked of the scenes that mem'ry drew.

" Here is Bodkin's bill. I recall his case.
His cheek was a sight, and he could not speak.
He had erysipelas in the face.
I saw him daily for over a week.
But that cheek was nothing to what he showed
When I asked him to pay me what he owed.
" He said, ' it was now only six months past,
He wanted to see if the cure would last.
If he had no trouble for six months more,
He'd see me about it,'—and closed the door."

Then the doctor scowled as his pencil flew,
And he figured the bills long overdue,
While he talked of the scenes that mem'ry drew.

Then, reflecting, his anger rose apace
As he saw set forth in another case
The ingratitude of the human race.

" There was Parson Browning, who had gall stones.
Who suffered ' like martyr upon the rack,'
So he said, when I'd dragged my weary bones
To attend him through each severe attack.
And I tried with directions kind and wise
To conquer his weakness for chicken pies
And puddings and cheeses and jams and tarts;
What a gourmand he! Well, by sundry arts,
And months of attention I brought him 'round;
Gall, liver, and parson were hale and sound."

Then his indignation arose apace,
As he pointed out in the parson's case
The dishonesty of the human race.

" 'Twas a gratis case, and I sent no bill;
I gave my work with a hearty good will,
To aid the truth and bring credit to skill.

- “ Imagine my feelings—one day I read
In *The World* a letter of warmest thanks,
As of one who had been raised from the dead;
‘Twas done by the use of Professor Blank’s
Electric belt’—the writer did aver.
The writer was—my friend the minister.
He then described the symptoms he had felt,
And claimed that through it all he’d worn the belt.
When he had not worn it ’twas in the bed,
And wrought a wondrous cure, the parson said.
- “ ‘Twas a gratis case and I’d sent no bill,
I had given my work with a right good will,
To aid the truth and bring credit to skill!
- “ But gentle woman is selfish yet,
And little she cares so her wish she get,
How others may trouble and toil and fret.
- “ What a trying patient was Mrs. Green,
Moaning o’ days, and lamenting o’ nights.
Mrs. Green was the bluest ever seen,
The cause of her blues was she had the whi—Bright’s;
But that was not all—there was more beside;
She had not been well since the blushing bride
Of young Alfred Green, who’d been rather fast,
But had settled down with the belle at last.
For the past three years he’d no mind to roam,
But no babes had come to adorn their home.
- “ But lovely woman is selfish yet,
And little she cares so her wish she get,
How doctors may trouble and toil and sweat.
- “ And charming woman is subtle of heart.
In the world’s great game she can play her part.
When she deals with doctors, behold her art.
- “ I used for madame my cunningest skill,
And waited on her with attentions nice.
Her health was restored; but I’m waiting still
On her—to pay therefor my modest price.

I called last week. She met me in the hall.
 'Dear doctor, dear! How good of you to call!'
 (Both hands extended, and a radiant smile.)
 'And there's that bill I've owed you such a while;
 But—Christmas presents cost so much, you see,
 For little folks! Come in and view our tree.'

"Ay, charming woman is subtle of heart.
 In the world's great game she can play her part.
 When it comes to a stand-off, oh! what art."

Thus the doctor sat that December night.
 He reasoned it over. "This is not right,
 And it must be changed and remodeled quite.

"The dullest unskilled lab'rer in the land
 For empty promises would never work.
 The merchant wants the money in his hand,
 Or written promise that one cannot shirk,
 Before his goods change owners. There's not one,
 Search where you will, who when his work is done
 Will take for pay a blessing—or a curse—
 Or calmly drop a 'Thank you' in his purse,
 Save only I; they say my legal friend
 Is paid to start, then pays himself to end.

"Now I miss my meals and I lose my rest,
 And I know my work and I do my best,
 But my business affairs are a common jest."

Then he raised his hand to the solemn skies,
 And he said, "Behold me! ye unseen eyes
 I' the realm where the doctor goes when he dies,

"And lend me your ears, and record my vow—
 S'welp me Hippocrates, Galen, and all
 Th' immortal physicians from then to now.
 I never more will prescribe for nor call
 Upon those whose accounts have not been paid;
 I'll not operate, till the fee is laid
 In my palm, or at least is placed in sight;
 I'll not miss my meals, nor get up at night;

And desert and oppose me, all ye powers,
The day that I work more than eighteen hours!"

And these resolutions so bravely made,
Were they kept till the doctor's head was laid
In the dust, leaving not a debt unpaid?

Alack and alas! that the vow was sworn
In the name of physicians, who had borne
The self-same traits that now made him to mourn.

From Hippocrates down, the active mind
Was ever outstripped by the tender heart;
And all selfish motives were cast behind
When the message came that the doctor's art
Was needed. Out reached the healing hand!
How could the spirits of that noble band
Who ever have held duty's high behests
Highest and greatest in their loyal breasts—
Who ever have loved Science and Mankind—
How could they aid a sordid oath to bind!

And these resolutions, intended to last—
In spite of temptations to stand steadfast—
Were broken to smash ere a week had passed.

What said the worthy doctor when he saw
His resolutions were a chain of straw?
Hope from some other quarter he must draw.
He said, "Oh, when! When will the people see
'The laborer is worthy of his hire,'
The faithful doctor's worthy of his fee!
Why does not some one with didactic fire—
Why does not some Maclaren wield his pen
To sketch an *ideal public*, and teach men
How they should *treat their doctor*! We have seen
Lessons enough of what the doctor's been.
The 'old-school' type was, is, and will remain;
Now teach the public what's *its* duty plain!

"For still this sentiment our bosom thrills—
How sweet the task to vanquish mortal ills!
(If only somebody would pay our bills!)"

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

COLLABORATORS:

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Editorial.

THE DOCTOR'S INCOME.

A variety of causes have combined to lessen the doctor's income to a degree very marked during the past two years. This is true not only in Cleveland and Ohio, but over the whole country, East, West, North, and South. The general business depression, with its lessons of economy, does not alone account for the condition; nor does the abuse of dispensaries and hospitals. We also endured the counter prescribing of druggists and the drain of the patent medicines for long years without feeling the present amount of inconvenience. The blame cannot all be placed upon over-crowding of the profession, nor to the multiplication of sanitariums, nor to the prevalence of quackery, nor to lodge doctoring and similar

forms of contract doctoring which disgrace the profession and lessen its legitimate income. These and other factors have been at work, some for long periods and others but recently, and have culminated in a condition neither comfortable to endure nor pleasant to contemplate. One other factor than those mentioned and perhaps more potent than any of them, although we hear less about it in this connection, is the advanced skill in the treatment of disease and in its prevention. Never before in the world's history was so much done to prevent disease — to limit its dissemination. This, of course, is the work of the medical profession, whose self-sacrificing efforts for humanity, known and recognized in individual cases and in numerous communities, has attained such great proportions as to effect a general influence through the length and breadth of the land. We are beginning to endure as a whole profession the martyrdom we have tasted as individuals, and talked about in our anniversary addresses and toasts "to our noble profession." The fact of the distinct lessening of disease, and with it a lessening of the need for the doctor's services, is capable of mathematical demonstration; but that is not necessary for our present purpose. The facts are undisputed. While we do not believe the millennium is about to be arrived at and the doctor find his occupation entirely gone, it behooves him to keep up with the march of events or he will find himself straggling in the rear and fain to drop in at some of the charities he has been so active during his palmier days in establishing. It is admitted that the science and art of medicine have advanced. The doctor does better work than he formerly did. He has done his work so well that he has less of it to do. Now we hold that the doctor is entitled to better pay for the work he does perform. This is especially true of the general practitioner, and it is the general practitioner who is suffering most from the present decline of income. As a class, the specialists have better appreciated their own deserts and increased their fees in proportion to the increase of knowledge and skill in the specialties,

Knowledge and skill in general practice have also increased, but the general practitioner's fee schedule is just about what it was 15 or 20 years ago, and some places what it was 30 or 50 years ago, and he is about as slow and careless in collecting it. The specialist is more apt to get a cash fee, to get prompt pay as well as bigger pay. The general practitioner should revise his fee bill and reform his business methods to meet the changed conditions. With the close competition and the constant demands upon the purse in the high pressure civilization in which we are living, there is scarcely a commercial enterprise or a professional practice which would prosper under the loose methods and indifferent management which characterize the business side of many a doctor's work.

We have been making a little comparison of fee bills, and we find among other interesting things that they are all behind the times, particularly as regards the work of the general practitioner. For instance, one finds that in the same town or county where the fee bill places the value of a perineorrhaphy, of an operation for lacerated cervix, or of a curetting of the uterus, at \$25 to \$100, the price for office consultation still remains at fifty cents and the visit at one dollar, and the obstetric case at \$10.00 or sometimes less. The vaginal examination may be placed at \$2.00 to \$10.00, but the night visit remains at \$1.50 to \$2.00. An operation on the eye may be worth \$25.00 to \$100.00, although the eye is only one organ of which the average human individual has two—while the general practitioner must carry his patient through a fever, making two or three, or ten, or thirty visits at a dollar or two a visit (if he gets it after a while), during which he may preserve the life, of which the average human individual has only one.

Then there are the contagious diseases. These have kindly been reserved for the general practitioner. So far no specialist has preëmpted the contagious diseases. But what are the fees? Remember, the enucleation of an eye is worth \$50.00 to \$100.00. But the doctor visits

scarlet fever—with all its dangers to the patient and anxieties to the doctor and risk to the doctor's family—for one dollar. There is a minority of the profession who get two dollars a visit.

Perhaps it will be argued that we cannot treat scarlet fever with the success and certainty with which some diseases are treated or some modern surgical operations performed. Certainly we have no specific for scarlatina, but we treat it with skill and success, and we undeniably prevent its spread. Does any one pay us for teaching the people how to isolate the patient and use disinfectants? No. Do they pay us for changing our own clothing or using disinfectants or foregoing obstetrical or surgical work or remaining away from our families while attending scarlet fever? No, that all goes for the ordinary price of a visit. Do they pay us for warning the family about sending the children to school and to keep the neighbors out of the house so that we shall not have any more business in that neighborhood? No. Are we paid for notifying the health authorities of the presence of a contagious disease so that its spread may be prevented? No. We are fined if we do not.

Do you think it would be different if we had a specific for scarlet fever? Let us see how it is with small-pox. Some of the fee bills name a fee of \$2.00 to \$5.00 a visit for small-pox. Think of it! Five to \$25.00 for removing tonsils or scraping out adenoids; \$15.00 to \$200.00 for dilating stricture of the urethra—and \$2.00 to \$5.00 for attending small-pox! But even at that price there is not any small-pox to attend. Small-pox has been nearly extinguished from civilized countries. In our time it is prevented by vaccination—at 50 cents a prevent. Some doctors get 75 cents or a dollar by promising to do it again, if it does not "take," and the vaccine is furnished by the doctor. The most of the vaccinations are done for 50 cents apiece. Why!—\$50.00 a head would not pay the debt which the human race owes to the medical profession for vaccination! And even the beggarly fifty cents has been taken away from the doctor in some

places, for instance, in New York, where compulsory vaccination is carried on by the Board of Health.

We shall in a future editorial present some fee bills and point out some facts concerning the same which are worthy of serious study by every practising physician.

NOW WATCH THE NEWSPAPERS.

On November 18th, Food Commissioner Blackburn filed suits against seven different manufacturers of patent medicines, not because they are patent medicines, but because they contain deleterious and poisonous drugs. The commissioner alleges that Scott's Emulsion, Winslow's Soothing Syrup, and Ayer's Cherry Pectoral contain morphin; that Agnew's Catarrh Powder and Birney's Catarrh Powder contain cocain; and that Wheeler's Nerve Vitalizer and Wheeler's Bromide contain chloral hydrate.

Within five days of the beginning of this action, viz., on Nov. 23d, Mr. Blackburn received the following letter:

MANSFIELD, O., November 22, 1897.

Hon. Joseph S. Blackburn, Food and Dairy Commissioner, Columbus, O.

MY DEAR SIR:—Will you kindly advise us what particular action it is, if any, upon the part of your department, that is causing a number of the proprietary medicines to discontinue their advertising in Ohio and take their goods out of Ohio markets, and particularly with reference to the J. C. Ayer & Co., of Lowell, Mass. Has any order been issued against them, Ayer's Sarsaparilla, or any other of their goods? Kindly give us all the facts you can that are of benefit to Ohio publishers, who are very much interested in this question.

It may be proper to add here that the Ohio newspaper publishers receive quite a large revenue from proprietary medicine concerns, and action of the character of which the Ayer people complain very naturally causes a commotion. As the Ohio Newspaper Maker is the organ of the Ohio Editorial Association, the Ohio Associated Dailies, and the Ohio Select List of Dailies, it will be looked upon to keep the brethren of the press posted in the matter. Your early reply will greatly oblige,

Yours truly,

THE OHIO NEWSPAPER MAKER,

W. S. CAPELLAR, Mgt.

With this letter was enclosed the following telegram:

LOWELL, MASS., November 20, 1897.
News, Mansfield, O.:

Discontinue advertising immediately on account enforcement Ohio food laws.

J. C. AYER CO.

This movement on the part of the patent medicine firm is just what might have been expected. The newspapers, which have received a great deal of money for advertising patent medicines and quack doctors, have always been the warmest friends of these vampires. They have always opposed legislation to regulate the practice of medicine and restrict the sale of patent medicines—excepting when in spite of their opposition a bill was about to be passed they have changed sides in time to say, “Didn’t we tell you so! This is just what we always wanted.”

Now that the patent medicines have been attacked by the Food Commissioner, what should they do but discontinue patronage to their allies in order to starve them into a mood to fight for more pap. Now watch the newspapers and see whether in the character of law-abiding and law-upholding, intelligent educators of the people—molders of public opinion—they will take the side of the Food Commissioner in his war against deadly drugs, or trump up arguments in favor of the nostrum venders, and when the battle goes against these latter, as we sincerely hope it will, it will be amusing to see the newspapers hang out the bulletin, “Didn’t we tell you so! We always knew the crime would be found out. Didn’t our sharp work bring the rascals to justice!”

A BILL TO REGULATE THE EMBALMING OF BODIES.

This question was taken up by the Medico-Legal Section of the Cuyahoga County Medical Society, at its December meeting. By the way, this society, and this section of it, has a habit of doing a deal of good and im-

portant work with very little noise and notoriety. A committee, consisting of Drs. O. B. Campbell and L. B. Tuckerman and Judge E. J. Blandin, was appointed to confer with the coroner and then to draft the proposed measure. The object of the law will be to prevent undertakers from unintentionally hiding crime by the use of embalming fluid, without regard to the causes of death or whether there was anything suspicious about the death. Undertakers often embalm bodies within a few hours after death, and as the fluid used is poisonous, it would be practically impossible to secure conviction of a person charged with poisoning, if, indeed, the chemist could be sure in his examination.

Another objection has often been urged against embalming soon after death. This objection crops up periodically in company with harrowing tales of bodies which have been disinterred showing evidences of having been buried alive. Of course most of us would prefer to be killed by embalming while in a state of apparent death, rather than wake up in a buried coffin; but either of these unpleasant incidents could be avoided by postponing both embalming and burial until unmistakable signs of death have appeared. There is another objection to too prompt embalming, viz.: that it may interfere with the results of an autopsy, even in other cases than those of suspected poisoning.

All these matters should be regulated by law, and perhaps the committee could consider them in its report. First allow a sufficient stated time to elapse, and be sure the patient is dead. This precludes the possibility of the physician becoming embarrassed during the post-mortem should the corpse rise to object; for he can make his apologies on the ground that the legal time limit had elapsed. At the autopsy, if there are suspicions, examine for poison, and take your specimens for the chemist, each substance and organ by itself, sealed in a sterilized jar and labelled. Afterward the undertaker can take charge of the body for embalming or burial, with a certainty of hiding no crime and of burying no live person.

THE MEDICAL LIBRARY ASSOCIATION.

This Cleveland organization, after many years of patient and persistent effort, is about to enter upon a more prosperous era. While the authorities at Case Library have been most kind and liberal in caring for the medical books, it has always been felt by the Medical Library Association that they should have a building of their own to contain the library and afford a home and place of meeting for the association and for other medical organizations of the city as well. This hope, it seems, is about to be realized. Steps have been taken to purchase a fine large stone residence of fifteen rooms, known as the Henry D. Childs property, located on the south side of Prospect street, a few doors east of Perry street. Probably before this writing is printed the whole transaction will be consummated. The purchase price is \$15,000, which is regarded as a very moderate figure. If the plans of the association succeed, and we hope they will, the building will be fitted up properly for library and reading rooms, perhaps with an adequate auditorium added, and will become the meeting place for all the medical societies of the city. Membership in the association is not limited to any school of medicine nor, for that matter, to the profession of medicine. It is hoped that all the physicians of the city and country round will become contributors to this laudable enterprise, and avail themselves of the privileges of the library. Many physicians of greater Cleveland are not aware that the library already contains nearly 5,000 volumes—quite a respectable beginning. Once in proper environment and well known and much used by the profession, the library will be augmented a great deal more rapidly than it has been hitherto. It will become one of the great features of professional life and literary activity in Cleveland. The profession here needs all such aids and rallying centers. At the present time nothing is more necessary for progress here than an extensive medical library and a reading room, with a hundred medical journals kept constantly

on file. Nothing will more effectually keep the hayseed from sprouting in the hair and the moss from growing green on the back of the average doctor than easy access to a good medical library and plenty of current medical literature.

Cleveland has greatly improved in a literary way during the past dozen years. We could tell some tales of the dark ages no longer than ten or fifteen years ago that would be heard with surprise by the visitor among the profession here today.

But we venture to predict an era of still greater progress in the future than the past has shown, and we welcome the increasing facilities of the library as a powerful influence toward this end.

We hope every doctor in Cleveland and in every suburb connected by electric cars to this city will feel a personal interest in this library, and will feel it right now when it will do the library the most good.

CLEAR THROAT MIRRORS AND GLASSES.

A practical wrinkle to which attention is called by Dr. Seaman, of Milwaukee (*Jour. Am. Med. Assoc.*), is very effective in dispelling one of the minor annoyances to which the laryngologist is subject. He writes as follows: "The method was introduced by George Wallis, L. D. S., dental surgeon to the London Throat and Ear Hospital, at a recent meeting of the staff. It consists merely of smearing a thin layer of ordinary soap, soft, but not moist, over the surface of the mirror, and afterwards polishing the latter with a dry cloth. The effect of this procedure is that, however much the mirror may be breathed upon, its reflecting surface remains perfectly clear and bright. When one takes into consideration the extreme simplicity of the procedure and the bothersome difficulties sometimes encountered in preventing the clouding of mirrors used in laryngology and dentistry, the value of this ready method cannot be overestimated. It has

proved very satisfactory to me, and as I have not yet seen it mentioned in the American journals, I take this opportunity of calling the attention of the profession to it."

A trial of this device demonstrates its practical value, not to the dentist and laryngologist alone, but to a much larger number of persons—unfortunates who are addicted to the use of spectacles. All who wear glasses for distant vision have doubtless felt the embarrassment of finding an opaque screen before their eyes on entering the warm and moist atmosphere of indoors on a winter's day. It is especially annoying to the physician, who makes "his exits and his entrances" many times in the course of the day, and most of all if he be myopic. With other defects of refraction one can usually recognize those present by removing his glasses, but for the myope it is Hobson's choice; he can neither see through his glasses nor without them. He must, with due deliberation, remove gloves, loosen wraps, secure handkerchief, doff and polish glasses before he may know by the countenances before him whether he is called upon to smile in sympathy and offer congratulations on the improvement of his patient, or to offer condolence and meet as best he may a fresh outbreak of the pathologic demon in the case. But all this will be matter for recollection only, if our spectacled friends will be guided by our counsel and try on their glasses the treatment above detailed for throat mirrors.

It is interesting to note the physical principles involved in this method. Moisture condensed on a cold glass surface is so frequently seen that it is somewhat startling to find one's breath without its usual potency in that direction. A little observation, however, by looking at the polished surface obliquely, after breathing upon it, shows the presence of Newton's rings, visible in a gradually contracting area and disappearing in a few seconds. This demonstrates that condensation has taken place, but instead of the moisture being in the usual layer of minute globules it forms a transparent film of infinitesimal thickness, whose presence is shown only by the in-

terference phenomena. The quantity of soap left after polishing is so minute as to be totally invisible, but it lessens the capillary attraction of the surface for water, and the moisture forms a film like that formed by a drop of oil floating on water.

F. K. S.

Periscope.

THE EPHEMERAL FEVER OF LYING-IN WOMEN.

Bumm, of Basel, in the *Centralblatt für Gynäkologie*, quoted in the *New York Medical Journal* for December 11th, commented upon the number of cases of fever in the Basel clinic after all possible aseptic precautions. There were one hundred and seventy cases of fever in seven hundred and fifty confinements, and of this number all but forty-eight were infected in some manner, but the source of fever in these cases was not determinable. He speculates upon the probability of their being due to simple retention of the lochial discharge, and consequent absorption under increased pressure, this retention taking place in isolated parts of the uterine cavity, such as the placental sinuses and uterine cornua. This report of Bumm's brings up the very interesting question as to whether stagnating lochia and retained organic material can produce any elevation of temperature when perfectly germ-free. Reasoning by analogy, it seems probable that such might be the case, inasmuch as ordinary aseptic traumatic fever is due practically to the same process, and yet that same trifling elevation of temperature unassociated with any other evidence of sepsis is so apt to be followed by uterine or crural phlebitis, that the conclusion that such fevers are not produced by wound infection is unsafe at the present time. In this connection it is of interest to note that hypertrophy of the decidua or retention of secundines after labor or abortion is generally followed by constitutional symptoms and sometimes by fever, disappearing after curettage, and yet there are positively no local signs either of decomposition or infection.

THE USE OF THE HAND IN OBSTETRICS.

At the meeting of the New York Obstetrical Society, held on October 5th, reported in the *American Gynecolog-*

ical and Obstetrical Journal, Malcolm McLean read a paper advocating the more frequent resort to the hand in obstetric diagnosis and treatment, pointing out the fact that only by the introduction of the entire hand into the vagina can many of the abnormalities of position be diagnosed. It is to be distinctly understood that this method is not advocated excepting in the face of undue delay, and that under such conditions not only may malpositions be diagnosed, but the internal pelvic measurements may readily be taken, if one knows the width of his hand, with the fingers flexed or extended, when the thumb is added to the fingers, etc. He advises the use of the hand to rotate the occiput forward in persistent occipito-posterior position as well as the correction of certain face presentations by the same means. Apropos of the danger of sepsis he remarks, "The operator who is unwilling or unable to sufficiently sterilize his hand for obstetric operations is unfit to be trusted at the end of an instrument of steel—boil he it never so wisely." He further points out the fact that previous to labor the hand does not come into contact with the interior of the uterus but with the membranes instead. This fact, by the way, explains why careless obstetricians have so few cases of sepsis. Vaginal sepsis is usually mild, and the imperfectly cleaned hand or instrument introduced before labor does not come in contact with the place of greatest danger, the interior of the uterus. In the discussion which followed the paper, a healthy reaction against the doctrine of no vaginal examinations was evident; one prominent participator remarking that he frequently sat with his finger in the vagina for half an hour at a time. It is agreeable to note this, for, following Leopold's leadership, there was a probability of allowing ourselves to go so far in the direction of no examinations that there was danger of overlooking the fact that only by careful vaginal examination can the majority of minor deviations from the normal progress of labor be made out. No unnecessary examination, but enough, would seem to be a safe motto.

SKEEL.

New Books.

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred Swain Taylor, M. D., F. R. S. Revised and edited by Thomas Stevenson, M. D., Lond., Lecturer on Medical Jurisprudence at Guy's Hospital, etc. Twelfth American, edited with citations and additions from the twelfth English edition, by Clark Bell, Esq., LL. D., of the New York Bar, etc. In one octavo vol. of about 800 pages and 75 engravings. Lea Bros. & Co., Philadelphia and New York, 1897. Cloth, \$4.50.

The book before us is a good illustration of the evolution of the collateral branches of medical science. A century ago, in the great legal battles, we find but scant use made of the medical jurist. Time was when most malefactors brought to trial for their crimes were without means to make the great defence which, in the present times, is too often successful in saving a rascal from the righteous vengeance of an outraged law.

It is the evolution of this wide and intricate defence of the criminal, and of the equally elaborate prosecution, that has called the physician into the witness box to match his simple medical wit against those masters of scientific word juggling and casuistry found at the trial table.

Too often has the honest doctor with the truest and most honorable thoughts declared that he was interested only in the curative action of his medicines and measures. Yet the fact still remains that no matter where he practises his art he is at any time liable to be asked, on the witness stand, questions in legal medicine that he has heretofore regarded as unimportant. Failure to show knowledge of such medico-legal matters may cause him to be severely censured, and justice to miscarry through his reprehensible lack of proper information. Nor does the ill effect of his ignorant influence end in the court room. In double-leaded headlines the critical press venomously assails the medical witness without distinctions, until the public confidence in the scientific acumen and integrity of the expert is severely shaken.

The average well-informed medical man has usually little taste for medico-legal studies, and less desire publicly to parade his knowledge in a court of justice, and I really fear that when he is called he does not take the pains clearly to inform himself as to the subject on which he is expected to shed the necessary light. On the other hand the lawyer acutely realizes the great weight that medical testimony may have in a given case, and is eager

to possess such a book as the one before us, that he may cram his head full for the coming trial, and with the usual assumption often convinces the jury that he is a better medical man than the badgered doctor who is vainly laboring to make his medical light shine through the obscuring mists that his artful tormentor has cast about him. The reason is simple, the lawyer is prepared and the doctor is not.

Books on medical jurisprudence are purchased and read far more by lawyers than by doctors. This should not occur. No physician should be uninformed on medico-legal subjects. His library should contain an up-to-date work on medical jurisprudence, and while this book of Dr. Taylor, so ably edited by Mr. Bell, does not, from a doctor's standpoint, fulfill my ideal, yet as a work of the greatest good to the professions which it joins, the writer believes it to be one of the best.

Mr. Bell has devoted much work and genius to the editing of this work and has succeeded in enlarging the scope of the book so as to take in much new matter without increasing its size, and we have all admiration for his ability to condense without actual loss. Medical men may have some cause for complaint, but from a lawyer's standpoint it is hard to see where the book could be improved. On the whole, the writer believes that, since all we are called upon to tell in a court is but truth percolated through legal rules and objections, we had best study legal medicine from a lawyer's point of view.

In this book, as in all other works of its kind that I have examined, the consideration of epilepsy is meager indeed, and the paragraphs on somnambulism hopelessly entangle our ideas of that interesting phenomenon with those purposeless and often violent acts of persons aroused from a deep sleep. The mental automatism of epilepsy is of sufficient importance to deserve mention, and the writer hopes that in the future editions of this valuable work cognizance will be taken of the frequency and importance of these automatic mental states; and that the *waking mania* be once for all separated from the deliberate, automatic performance of the sleep walker.

The high standard ever occupied by this work of Dr. Taylor has lost nothing by the able editing of Mr. Bell, and the publishers are to be commended for this splendid exhibition of the bookmaker's art.

ALDRICH.

PROCEEDINGS OF THE SEVENTH ANNUAL MEETING OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES. Held at Columbus, O., May 25, 26 and 27, 1897. Edited by James E. Pilcher, M. D., Captain in the Medical Department of the United States Army; Secretary and Editor of the Association. Columbus, O., Berlin Printing Co., 1897.

This handsome volume of proceedings indicates the rapid and successful development which has been the history of the Association of Military Surgeons during its six years of growth. It was organized at first as an association of the surgeons of the national guard of the various states, but two years later admitted medical officers from the army and navy. Nor is its membership limited to the United States, as the list of corresponding members contains names of medical officers from all parts of the world. Claiming Dr. Senn as founder, and electing him president for three successive years, the association has since demanded the services of Dr. Geo. M. Sternberg, Dr. Louis W. Reed, Dr. Albert L. Gihon, and for the present year, Dr. J. D. Griffith, in the same office.

This volume of proceedings, still more the series of volumes which constitutes the record of the association from its organization, forms a valuable repository of special information not elsewhere to be found.

Dr. Gihon's presidential address is devoted to a masterly exposition of the relation borne by military medical officers to the non-military profession on the one hand, and to the non-medical *officiel* on the other. He gives considerable space to a definition and extended explanation of the terms grade, title, and rank, in their military application, terms whose distinction is usually, to the outsider, and sometimes to the insider, involved in a haze of obscurity.

The papers, some forty-five in all, include a variety of subjects, but all have a distinctly military implication. They touch on various aspects of naval and military medicine, surgery, and hygiene, personal identity, clothing and accoutrements, first aid and transportation for the disabled.

Included among the contributors of the papers are four Ohio men, Dr. W. A. Westervelt, Dr. G. I. Cullen, Dr. J. J. Erwin, Dr. H. M. W. Moore. Dr. Pilcher, also, has been reckoned by the profession of the state as one of their number, but has now been transferred to Fort Crook, Neb. Space will not allow detailed mention of any of the papers, many of which are of great interest and value aside from their military bearing. F. K. S.

DISEASES OF THE EYE. By Edward Nettleship, F. R. C. S. Revised and edited by W. T. Holmes Spicer, M. A., M. B., F. R. C. S. Fifth American from the sixth English edition. With a supplement on Color-Blindness, by William Thomson, M. D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. With two colored plates and 161 engravings. Lea Brothers & Co., Philadelphia and New York, 1897. 524 pages. Cloth, \$2.25.

The moderate size and cost of this volume, which nevertheless covers all divisions of the subject as fully as will usually be required by the majority of students and practitioners, make it popular as a text-book. Its frequent reissue has enabled the author and editor to keep well up with the rapid advances in ophthalmological work, and it has now been subjected to thorough revision for publication in this country, as well as for the English edition, so that it is one of the best books on the market in its sphere.

For the student and general physician it would have been well, in the case of this book as well as in others of a similar scope, had attention been called more forcibly to the rôle played by refractive error and muscular anomalies in the etiology of congestive conditions of the eye and neighboring tissues, as well as in a number of functional disorders of more or less remote organs. It is the man in general practice, not the oculist, who most often sees these cases, and it concerns him even more than the oculist to recognize the cause of trouble. Advanced ideas in a text-book, however, might subject the author to denomination as a "crank," and interfere with sales.

F. K. S.

THE ELECTRO-THERAPEUTIC GUIDE. By Wm. F. Howe, M. D., Ph. D., President of the National College of Electro-Therapeutics; Editor of *The Electro-Therapist*. Third edition. Published by the author, Indianapolis. 49 pages.

This is an outline of essentials in electro-therapeutics, containing, in condensed form, points in regard to the production and effects of the various forms of electric energy, definitions of technical terms, and therapeutic indications in an alphabetically arranged list. F. K. S.

PAMPHLETS RECEIVED.

LILLIAN G. TOWSLER, M. D., of Cleveland: PYOMETRA—REPORT OF A CASE; from *Cleveland Journal of Medicine*.

ARTHUR R. ELLIOTT, C. M., M. D., of Chicago: URINARY ANTISEPTICS IN CYSTITIS; from *North American Practitioner*. ALBUMIN TESTING; from *New York Medical Journal*.

CHARLES E. PAGE, M. D., of Boston, Mass.: DRUGS AND HEART FAILURE; from *Medical Record*. THE "MONTHLY SICKNESS." ADVANTAGES OF EARLY MARRIAGES AND LARGE FAMILIES.

JOSEPH JACOBS, of Atlanta, Ga.; A DISTINGUISHED PHYSICIAN-PHARMACIST—HIS GREAT DISCOVERY, ETHER-ANESTHESIA.

H. E. HANDERSON, A. M., M. D., of Cleveland: THE SCHOOL OF SALERNUM. AN HISTORICAL SKETCH OF MEDIEVAL MEDICINE.

CHARLES A. OLIVER, A. M., M. D., of Philadelphia: THE OCULAR EXPRESSIONS OF GOUT; from *University Medical Magazine*.

EDWARD NICHOLAS LIELL, M. D., of New York: THE RELATION OF THE PREGNANT UTERUS TO THE REFLEX NAUSEA AND VOMITING ACCOMPANYING GESTATION; from *American Medico-Surgical Bulletin*. EXCISION OF THE COCCYX FOR FRACTURE AND NECROSIS, WITH A REPORT OF FOUR CASES; from *The Medical News*. PERICRANIAL CELLULITIS AND CEPHAHEMATOMA, CONSEQUENT UPON THE USE OF HIGH FORCEPS IN A MODERATELY CONTRACTED PELVIS; from *Archives of Pediatrics*.

JUDSON DALAND, M. D., of Philadelphia: THE TREATMENT OF MALARIA; from *International Clinics*. Vol. II, Sixth Series.

HENRY ALFRED ROBBINS, M. D., of Washington, D. C.: LUES VENEREA AND THE THIRD ACT OF THE DRAMA OF SYPHILIS; from *Virginia Medical Monthly*. NON-VENEREAL SYPHILIS; from *Journal of Cutaneous and Genito-Urinary Disease*. SYPHILIS OF THE INNOCENT; from *Maryland Medical Journal*. CEREBRAL SYPHILIS; from *Maryland Medical Journal*. SYPHILIS OF THE EYE, EAR, AND THROAT; from *Maryland Medical Journal*. THE TREATMENT OF SYPHILIS, Second Paper; from *Maryland Medical Journal*. THE TREATMENT OF SYPHILIS, Fourth Paper; from *Maryland Medical Journal*.

GEO. W. COX, M. D., of Chicago: THE PREPARATION AND TESTING OF DIPHTHERIA ANTITOXIN; from *Jour. Am. Med. Ass'n*. STREPTOCOCCIC INFECTION AND MARMOREK'S SERUM; from *Jour. Am. Med. Ass'n*.

FRANKLIN STAPLES, M. D., of Winona, Minn.: STATE MEDICINE TO THE PRESENT TIME; from *Jour. Am. Med. Ass'n*.

Society Proceedings.

CUYAHOGA COUNTY MEDICAL SOCIETY.

The December meeting of the Cuyahoga County Medical Society was full of interest and spirited discussion. In the absence of the president, Dr. Knowlton, Dr. Bunts, the second vice-president, occupied the chair. Under a motion to appoint a legislative committee, re-

marks were made by a number of members, the consensus of opinion being that the course taken should be to secure a state examination for the practice of medicine, and that such an examination should embrace the fundamental branches of the science rather than theories and practice.

DR. QUIRK presented a specimen of dejection from a case of membranous enterocolitis. The patient was a woman 29 years old, light blonde. For years she had not been well. Ten years ago she developed a diarrhea. Five years ago she was thrown from a carriage. Since then the symptoms have been more severe. A year ago she was having from 10 to 20 passages a day, usually between 3 and 9 A. M., the stool containing shreds and often complete casts of the rectum. Urine was loaded with albumin. Temperature was normal, or at times subnormal. The treatment consisted of general tonic and local. A long glass uterine irrigator was used in making the injections, as such a tube may be made to pass the sigmoid flexure. A marked improvement has followed the treatment.

DR. ALDRICH had seen three such cases. None of them passed casts, but large, long pieces of mucous membrane. In all there was a marked nervous condition present. He believed the local condition to be in the colon and rectum. In the dejections of one he found microorganisms resembling tailless spermatozoa.

DR. JNO. P. SAWYER had seen a few cases, all associated with a marked nervous condition. The previous history in each case showed development of nervous symptoms leading to a profound neurosis. One case was that of a woman—blonde, of neurotic type, emaciated, with periods of depression and hilarity and a tendency to melancholy. The development of these symptoms culminated in a severe paroxysm of pain and burning in the colon. Copious stools containing at first hard masses were soon followed by the mucous stool. Two cases under his notice had been in brunettes, one the case of a salesman, the attacks having occurred after seasons of particularly hard work when his habits of eating and sleeping had been irregular. The local trouble is in the colon. It is not a catarrhal difficulty resulting in the elimination of fibrin or material from the blood, but a neurotic disturbance of the secretory functions. The mucus contains mucin but no fibrin. Usually there is some rise of temperature. An inaccuracy in taking the

temperature often arises from not leaving the thermometer long enough. Especially in neurotic conditions is the cold instrument under the tongue liable to stimulate the vaso-constrictors and so lead to a temporary local coolness. If left long enough for the stimulation to be overcome a rise of temperature may be detected. This is noticeable in incipient phthisis. A regular movement of the bowels is to be desired. An injection of a half pint of olive oil, or an ounce of castor oil with two or three ounces of olive oil retained over night acts well in softening up hard masses.

DR. H. J. HERRICK said he did not concur in the theory of the nervous origin of membranous colitis. The nervous condition present he believed to be due to a weakening of nerve forces produced by exhausting occupation or disturbance of the digestive processes. The origin of this trouble may be in the stomach, the liver, or any of the organs connected with digestion. Injections will not cure; proper corrective means by stomach must be used. The patient is to be put at rest in bed. A warm, soft soothing poultice of flaxseed will allay irritability and promote secretion. A corrective powder containing opium, calomel, ipecac, and soda is indicated, and also a course of dietetics.

DR. QUIRK reported a case of stricture of the rectum. The patient, 28 years old, general health good, eight years ago had a fistula in ano, which closed a few years ago. The anus had a stellate appearance, evidently due to slough. She was obstinately constipated, had only liquid stools, frequent desire to stool, also vesical irritation. A muco-purulent material was discharged from the anus. About an inch and a half from the anus a stricture could be made out. Passing the tip of the finger was followed by discharge of blood and pus. Dilating with a bivalve speculum, an ulcerated surface above was made out. After washing out and swabbing with peroxid of hydrogen, a glycerin tampon was placed in the vagina. A few hours later he was called on account of hemorrhage, to check which he tamponed the rectum. Two days later a formed passage as large as one's finger appeared with some blood. Continuing the treatment, a little blood appearing from time to time. Two weeks later a profuse hemorrhage occurred, which was again controlled by tamponing. A week later she was passing a normal stool with little pus and no blood. At present the index finger may be readily passed through

the stricture, the membrane is becoming smooth, and the movements are normal as to size and consistency. It is irrigated twice daily with sulphate of copper and cold water.

DR. T. C. MARTIN, being present, was called upon for a discussion of the paper. He said that on account of the variable thickness of the sphincters and length of rectum, locating the stricture $1\frac{1}{2}$ inch from the internal sphincter did not give an accurate idea of its location. This stricture was probably on a level with the levator ani muscle. Such strictures respond to the gradual dilating method, but when located higher up, incision gives the best results.

DR. BUNTS spoke of a case of stricture high up in the rectum, due to syphilis, in which inguinal colotomy had been resorted to after a failure to accomplish anything by dilatation.

McMICHAEL.

CLEVELAND MEDICAL SOCIETY.

Regular Meeting, December 10, 1897.

The president, Dr. M. Rosenwasser, was in the chair. Officers to serve for the year 1898 were nominated as follows: For president, Dr. A. F. House; first vice-president, Dr. F. E. Bunts; second vice-president, Dr. E. G. Carpenter; secretary, Dr. J. M. Ingersoll; treasurer, Dr. F. C. Taylor; censors, Drs. R. J. Wenner, W. T. Corlett, P. M. Foshay, R. E. Skeel and J. H. Lowman; pathologist, Drs. W. T. Howard, Jr., and Walter Lincoln; trustees, Drs. H. C. Brainerd, H. W. Quirk, N. Stone Scott and Chas. Gentsch.

Under the program of the evening a paper was read by Dr. Geo. Seeley Smith, "Observations on Frog-Skin Grafting," with report of cases. The subject was well covered by the paper. The first case, with patient present for examination, was described by the doctor as follows:

"In August, 1893, before locating in Cleveland, I was called to see a case of very deep and extensive burn in a child five years of age. On July 18th, four weeks previous to my first visit, the boy's clothing caught fire, and before the flames could be extinguished the entire thickness of the skin had been destroyed over a large area of the trunk, face, neck, and arm. The part involved may

be traced by a line running from the thyroid cartilage down the median line of the body to within an inch of the umbilicus, and from here following the band of the trousers around to the left to the middle of the back; up to the external occipital protuberance; to the malar bone, on the left, including a portion of the ear; diagonally across the face to the right corner of the mouth, and completing the area by connection this point with the thyroid cartilage. The axilla was also involved, and the upper arm was denuded over its entire circumference, for two-thirds of the distance from shoulder to elbow.

"The entire surface was covered with healthy granulations that bled freely upon the slightest touch. The case had received but little attention, a fact which was emphasized by the fold of the axilla being firmly adherent, through neglect to separate the parts in dressing. The arm, consequently, was firmly bound down, and my first care was to break up these adhesions under ether. It being evident from the first that healing by granulation would not only require many months, but would result in considerable deformity, it was decided to resort to grafting. The first difficulty here presented itself in the extensive surface and the weak and nervous condition of the boy, so that any attempt to take the necessary epidermis from him would have been highly imprudent, if not fatal. It being very difficult to secure human contributions, I finally resorted to the experiment of trying frog-skin, with very gratifying results.

"On the 29th of August, operations were begun by planting upon the chest twenty pieces of skin, each a quarter of an inch square, placed in two rows of ten each, each graft separated from its neighbor by a space of half an inch. In two days the skin became closely adherent to the granulating surface, and in five days the grafts lost their original color, and the surface between them assumed a slightly glazed appearance, and was somewhat whiter than before. If it were possible to paint a granulating surface over with the thinnest layer of the white of an egg, I imagine it would present much the same appearance.

"In the course of a week the original grafts disintegrated, leaving behind this embryonic epithelium, which, in time, lost its transparency, and assumed by degrees the appearance of human skin. In every instance the skin lost its original color in a few days, and came off with the dressing in from six to ten days.

"The case was dressed and grafted every second day, from twenty to eighty bits of skin being used on each occasion. On October 5th, seven weeks after my first visit, the parts were all grafted, nearly a thousand grafts having been planted. The skin, however, was soft and immature and required constant care and dressing for nearly three months. The time taken for grafting was unnecessarily prolonged in this case, as I did not then understand the process of healing. Fearing failure when the grafts sloughed, I regrafted the entire surface several times, an unnecessary precaution, as subsequent cases have proved. During this period of uncertainty I also grafted a part of the face with tiny particles of human cuticle, but I did not use enough to make any great progress.

"The child attended school during the following spring, having entirely regained his former robust health. At this time the skin presented a peculiar and characteristic appearance. Although there was no contraction, and the patient was able to throw his burned arm vertically over his head without apparent effort, the epidermis was everywhere hard and tenacious to the touch, as if it had been developed upon a substratum of contracting fibrous tissue. After a few months this hardness disappeared, and a perfectly elastic and pliable skin remained. Several bands of cicatricial tissue extend across the burned area at places where the granulations were very soft and flabby at the time of operation."

Two other cases, which came under observation of the essayist while house-surgeon at Rhode Island Hospital, Providence, were reported, in which similar results were secured.

The *modus operandi*, varying somewhat in different cases, but much the same as in using human skin, is as follows:

A small or medium-sized frog is used, after cutting the spinal cord by means of sharp-pointed scissors at the articulation between the head and body, as shown by a slight transverse depression. The frog, thus rendered inanimate, is washed thoroughly, then rinsed with a solution of mercuric bichlorid (1-1000), and afterwards in sterilized water. He is then placed on a sterilized plate moistened with boiled water, and the skin over the belly, back, and legs is cut away. The skin is placed on another plate partially filled with sterilized water, and cut into small pieces about one-fourth inch square. The

pieces are then placed upon the granulating surface, separated from each other by about half an inch. The dressing used consists of an ointment of vaseline, an ounce, and boric acid, a dram, spread upon a compress and applied directly to the surface. A pus-like fluid forms on the granulations after the grafts are applied, which becomes very offensive after twenty-four hours. On this account the dressings are changed every two days and sometimes oftener. In dressing, the surface is washed with a weak solution of carbolic acid (1-100) and then with sterilized water, each graft pressed upon the granulating surface, and the dressing applied.

Recovery is slower than with grafts from human skin in the same quantity. The skin resulting from the grafting has no hair, no sweat glands or sebaceous follicles, but is highly elastic.

DR. C. W. SMITH: The first time I saw this boy the grafts had been placed and the surface had a mottled appearance, something like flakes, one-half to three-quarters of an inch in size, gradually joining. Spawn-like embryonic tissue spread very rapidly, covering the granulations and coating them over with a protective layer. When the grafts came off they looked very much thinned out, as if they had lost much of their substance.

DR. H. W. QUIRK described the method of using human scarf-skin, obtained by blistering the surface, for grafting purposes. He was glad to know that frogs were to have a new field of usefulness, but thought that a plenty of human skin could be procured for use in grafting.

DR. HUNTER ROBB suggested that skin for grafting large surfaces could be obtained in hospitals, from amputated limbs, and remarked that Martin had shown that the limb of a healthy individual could be employed even after exposure for many hours in the open air at a temperature of 82 degrees F.

DR. A. F. HOUSE stated that he had used frog-skin, squab-skin, and human skin at different times, and all with good results. A New York man had used scarf-skin, 18 months after its removal, with good results.

DR. N. STONE SCOTT stated that his experience with X-ray burns was that grafts would not grow upon their surface.

DR. J. H. LOWMAN discussed the subject at considerable length and detailed many interesting facts regarding the treatment of burns with grafts of different kinds.

DR. G. S. SMITH, in closing, stated that white skin

grafted upon a colored man was at first white but gradually became pigmented; and that black skin grafted upon a white surface would color the surrounding parts to some extent.

"Diagnosis and Treatment of Occipito-Posterior Positions" was the subject of a paper read by Dr. J. H. Belt.

After detailing the difficulties of diagnosis in these cases, the doctor said that one object of his paper was to advocate examination by means of the hand in the vagina, under aseptic conditions and full anesthesia, by which positive evidence on essential points could be secured. Aid may be given by pushing up the sinciput with the fingers and making counter pressure on the occiput. If movement is arrested, advance and rotation may be aided by forceps, to complete the natural movement.

This paper was discussed by Drs. Quirk, Siegelstein and F. S. Clark.

DR. C. F. HOOVER presented specimens of septic endocarditis and aortic aneurism, with history of cases, which were discussed by Drs. Dutton and Hoover.

C. W. SMITH.

Correspondence.

CLEVELAND, O., Jan. 1, 1898.

Editor Gazette:

It is well that opinions differ, even among men of authority in our own profession, else what inducement could honestly be held out to the syphilitic patient upon whom we so often urge a prolonged course of treatment, with the encouragement of bringing about recovery at the expiration of three, four, or more years, provided instructions are faithfully followed. Certainly there would be little left for the patient or physician to hope for if there could be no appeal from the decision attributed to that eminent specialist in luetic affections, Professor Zeissl, who, at one of his clinics in Vienna, said: "Some think, when a patient has for some time enjoyed immunity from the manifestations of syphilis, that he is cured; but I tell you, gentlemen, that if a man contract syphilis he will die syphilitic, and at the day of judgment his ghost will have syphilis."

Certainly, instances without number can be cited by

physicians of large experience to prove that by appropriate treatment much more than merely "a stay of proceedings" can be brought about in the majority of syphilitic cases; that persons once so affected have not only lived to advanced years apparently free from symptoms of the disease, but have begot children who never presented evidence of the malady.

Were our *materia medica* to be robbed of the conclusively proven specific, mercury, then well might the researches of Laveran, Golgi, Geraldi, and others, concerning the hematozoön of malaria, be considered as so much labor wasted, and the plasmodium of this disease find in quinin nothing antagonistic.

Very frequently indeed do we hear of disputes about the invention of surgical instruments, and priority in the discovery of anesthesia has become, as we all know, a worn-out story; but it has been left for two well known English obstetricians to dispute over the "invention" of a bag. The future historian will no doubt be puzzled to decide who first conceived the brilliant idea of carrying his instruments in a bag, and calling it an "obstetrical bag." When this important question is settled, we shall be glad to know to whom the first use of sponges should be credited.

There is much complaint, and justly so, against the prevalent law which often, without previous warning, takes a physician from his patients, and drags him into court to give testimony, often expert testimony in some case or other, and with little assurance of receiving as compensation for such service even the ordinary witness fee. Certainly some law should be enacted which will respect the physician's rights in this matter.

CARLISLE.

Notes and Comments.

Professional Hints, by Geo. W. Griffiths, M. D. It is a bad idea to have office, residence, and stable in different portions of the city.

It is a bad idea to be too prompt with the hypodermic syringe. *It is like a gun, dangerous without lock, stock, or barrel.*

It is a bad idea to have a small slate in your office. It indicates small business.

It is a bad idea to neglect your office hours. "Take care of your office and your office will take care of you."

It is a bad idea to turn professional visits into social business.

It is a bad idea for the young doctor to live in single blessedness too long.

It is a bad idea not to send out your bills for professional services promptly at the end of each quarter, *making no exceptions.*

It is a bad idea to turn aside from the U. S. Dispensary to follow false gods.

It is a bad idea to encourage your patients to put off sending for you until unseasonable hours.

It is a bad idea to make your business secondary to anything else.

It is a bad idea not to stand by your respectable professional brother. Curses, like boomerangs, come home to base.

It is a bad idea for the professional man to dress and look like a jockey.

It is a bad idea not to have your sign give your full name; some other "McGregors" may come in and get the benefit of your reputation.

It is a bad idea not to belong to a first class medical society, and attend regularly all its meetings.

It is a bad idea not to have "Office Practice, Cash," prominently displayed in your office. It prevents the transient "Thank you."

It is a bad idea not to have a good sign that every one can see.

It is a bad idea to have the office hours on front of office where public can see them. You may be (very often) in your office outside of your office hours.

Treatment of Somniloquy. In *Items of Interest*, for November, Charles Nevitte Gibbons, D. D. S., of New Orleans, describes an appliance he devised for the cure of sleep-talking. The patient was a middle aged gentleman who during his sleep "was a nuisance to all his family, keeping them awake with his loud and constant jabbering." He was a sensitive gentleman, of refined disposition, and it was a source of great mortification to him to know that he made himself so objectionable to all about him.

"Upon examination I found that he had lost both lower sixth year molars, thus leaving spaces which I utilized in the following manner: I took an impression of the lower arch and tongue with an impression tray specially devised for this case. Next I made gold crowns to cover the twelfth year molars, on each of which I soldered a flange or extension along its anterior approximal surface. These crowns were permanently cemented over the natural teeth. I then made of vulcanite rubber a thin plate accurately fitting and resting upon the palatal surfaces of all the anterior teeth, and having projections which would extend between the bicuspid and molars on each side.

"In use it was placed in position in the mouth with the extensions at each side passing under the flanges on the crowns. Any effort on the part of the patient to raise the tongue is prevented by the fact that the flanges on the crowns stop the plate from lifting at the posterior part, whilst the anterior part is further supported by resting on the anterior teeth. The plate was fitted over the tongue so that that organ has sufficient room for comfort, and there is abundant space for the action of the muscles in deglutition; otherwise the fixture could not be tolerated. This is worn with comfort and is not displaced during the night. The gentleman does not talk in his sleep any more, and he, as well as his family are well pleased with the result."

A Fearful Notion has swept over the country that to excise something is *per se* a great and glorious thing, and that to operate is necessarily to be a surgeon. This is indeed a very puerile error. There is an old remark that certain physicians see many patients, but few diseases. I fear something similar might be said of recent surgery. Is not this in some measure the result of the great, almost exclusive attention given to operations *per se*? Have we not been largely passing through a kindergarten stage of surgery, in which the struggle has been to teach everybody, by pictures, diagrams and "gifts," the technique of hysterectomy and other ectomies?"—J. H. Dunn. Exchange.

Western Medical and Surgical Gazette is the name of a new monthly published at Denver, Colo. The editors are Wm. N. Beggs, A. B., M. D., and the business manager W. H. Sharpley. It has only reached No. 2 of

Vol. I., but if the present quality of contents is maintained it deserves a long, long life and prosperity.

Druggists Tired of Patent Medicines. According to a Louisville correspondent to the *Pharmaceutical Era*, the retail druggists of that city at a recent meeting talked of refusing to keep in stock any of those proprietary medicines which are offered at cost or below cost, such as Hood's, and Wells, Richardson & Co.'s products, the Cuticura preparations, Carter's Pills, Castoria, etc. The discussion favored throwing out "patents," and placing on sale in their stead the druggist's own preparations. We are inclined to the opinion that many pharmacists are wishing they had let patent medicines alone in the beginning and stuck to their legitimate province of compounding physicians' prescriptions. If they ever expect to regain their lost standing with the medical profession they will have to be about it soon. Possibly it is even now too late.

On one of the advertizing pages of the local German daily newspaper there has appeared during the past several weeks, in the columns headed MEDICAL, the following:

"DOCTOR W. CONRAD, German Physician and Surgeon. Office hours: 9:30-11:30; 3:30-5:30; 7:30-8:30. 1109 Woodland Ave. Telephone E. 101."

"FRAUENARZT. Dr. Macks, 'The Ellington,' corner Superior and Erie. Office hours: 8-10, 3-4, 7-8. Telephone 1,255 and 1,046."

Comment is unnecessary.

Dr. Christian Sihler and Dr. H. L. Gilchrist have been re-elected president and secretary of the Lutheran Hospital staff.

More Responsibility for Doctors. The blame for bad results has frequently been shifted onto the doctor who attends the case of injury from assault or accident. The doctor's treatment or operation rather than the original injury may be held to be the cause of death or disability. The latest development is that the X-ray used for diagnostic purposes may cause death.

Geo. A. C. Orme was recently on trial at Elmira, N. Y., for the willful murder of James Punze, by shooting in the back of the head on July 31st.

The defense claims that the wound had healed, and

that three weeks after the shooting, Punze was up and about the hospital, doing well. Then an unsuccessful attempt was made to locate the bullet in Punze's head by the skiagraph, after which the patient grew worse and died in a week. It is said that the Crooke's tube was held close to the patient's head for forty minutes, and although there were no surface indications, Dr. John F. Pitkin, of Buffalo, testified that in his opinion the X-ray was the cause of death.

The Laryngoscope is to have a foreign edition published in Bristol, England. Straws tell which way the current sets. We have long predicted that the next country to lead the world in the science and art of healing will be America. That time is coming.

The Sharp Slate Pencil has again proven itself a dangerous article. This time a little six-year-old boy on Dorchester avenue will likely lose an eye. The distressing frequency of accidents with pencils should lead to an inflexible rule enforced by school teachers and parents—never to allow a child to carry a pencil outside of a pencil box.

Balsam-Oil Surgical Dressing. Dr. A. Ernest Gallant, in the *New York Polyclinic*, reports cases illustrating the use of a surgical dressing devised by Dr. W. W. Van Arsdale. It consists of a bunch of absorbent gauze, upon one side of which is poured a mixture of balsam of Peru, 5 per cent, and castor oil, 95 per cent., and the oily side applied directly to the affected surface or opening. The gauze is then covered with rubber tissue and the dressing fixed in place by a suitable bandage. This is denominated the *balsam-oil dressing*. It is recommended in a great variety of conditions, including abscesses and felons after incision, ulcers of various kinds and degrees, sinuses and fistulæ, burns, abrasions, and wounds, aseptic surgical wounds as well as others.

For varicose ulcers a special method of dressing is described. Two or three yards of gauze are folded into a square pad in which a window is cut of the size of the ulcer. The pad is very thinly spread with Hebra's ointment, a mixture of equal parts of lead plaster and lard, and placed so that the plaster ring surrounds the ulcer, and the balsam-oil dressing is applied directly to the granulating surface. This secures free drainage from the ulcer and protection of the adjacent skin.

The claims for the usefulness and value of this dressing are based upon its use in 29,000 cases at the Good Samaritan Dispensary, New York.

Dr. Van Arsdale finds that sterilized castor oil, without balsam of Peru, is the most satisfactory dressing for Thiersch skin-grafts and large skin-flaps without pedicles.

In recapitulation, Dr. Gallant states the following points of advantage for the balsam-oil dressing:

1. It absorbs all secretion, until the dressing is saturated, keeping the ulcer or abscess perfectly clean and dry.
2. It prevents scabbing and lessens pain, heat, redness, and swelling.
3. It deprives the bacteria of moisture and hinders the production of ptomaines. It does not prevent growth of the bacillus pyocyaneus, but this bacillus is harmless and does not delay healing.
4. Epithelial growth goes on rapidly, and eczema around the margin disappears. The irritation often caused by antiseptics is never met with.
5. Removal is painless, as the dressing does not adhere to the granulations, nor does bleeding occur.
6. Granulations are never profuse and quickly shrink after the dressing is properly applied.
7. The dressing need not be renewed oftener than twice a week.
8. Irrigation, disinfection, or scraping of abscess cavities is considered detrimental to rapid repair.

Dr. R. Harvey Reed has resigned his position as editor of the *Columbus Medical Journal*, and president and manager of the Columbus Medical Publishing Co. Dr. J. M. Dunham has been elected president and Dr. J. E. Brown editor and manager. The change was caused by Dr. Reed having accepted the position of superintendent and surgeon in charge of the Wyoming General Hospital, located at Rock Springs, Wyoming. We predict that the name of R. Harvey will soon become familiar to the profession of Wyoming.

The Georgia Journal of Medicine and Surgery has outgrown its pants — beg pardon — its pages. Instead of 50 it will henceforth contain from 75 to 100 pages. Its editors are Drs. St. J. B. Graham, J. G. Van Marter and W. E. Fitch. We are glad to witness the success of so good a journal.

The Obstetrical Society of Cincinnati recently held its annual meeting, at which the following officers were elected: President, Dr. E. S. McKee; vice-president, Dr. W. D. Porter; recording secretary, Dr. Wm. Gillespie; corresponding secretary, Dr. M. A. Tate; treasurer, Dr. Geo. E. Jones; librarian, Dr. C. L. Bonifield.

Dr. Edward N. Liell, one of the collaborators for the *American Medico-Surgical Bulletin*, has been obliged by the ill health of his wife to leave New York. They are living at Jacksonville, Fla. Dr. Liell continues his connection with the *Bulletin*.

Dr. Robert Swigert has been appointed interne at Cleveland General Hospital.

Medical Study Abroad. Dr. W. S. Caldwell, in a letter from Vienna (*Jour. Am. Med. Assoc.*), writes of the comparative advantages of study in different places. As he has been familiar with many of the foreign schools and teachers for twenty years, his ideas are well worth considering:

"Let me suppose the case of a young man who has had a few years of general practice, or perhaps has only just graduated. The field that he occupies, or the one that he proposes to occupy, is one where he must play the rôle of the general practitioner in the widest sense.

"To keep abreast of the times, he feels the necessity of further instruction, especially in the more practical matters that pertain to his profession. But in looking over his environments, two obstacles present themselves at the very outset. His means are limited and he can only spend a few months away from his field of labor. Where shall he put his time in, at home or abroad? Most decidedly at home, unless, however, there is a large element of fraud and humbug in his make-up, and he is seeking very little knowledge and a good deal of buncombe."

"If, however, you are not too far advanced in years and have a sufficient amount of money and time at your disposal, the benefits of a course of study abroad are certainly not to be ignored, for beside what you know of medicine proper, the acquisition of the knowledge of a foreign language is no small factor in the make-up of an all-around educated man, which every physician should strive to be.

"Supposing you understand German, or intend to stay in Germany until you acquire such a knowledge,

what are the subjects that are better taught here than at home? First comes internal medicine. Not because the subject is better understood or more skilfully taught than by our best teachers, but because the clinical material is much more abundant here and can be much better utilized for clinical purposes, and the number of those to be taught are much fewer in proportion to the material available. If one takes Professor Nothnagel and his first assistant, you have thus access to a large number of patients whom you can personally examine, make your own diagnosis, and have it corrected or criticized by your teacher; hear many of these cases discussed fully by one of the best teachers in Europe, and follow them to the dead-house if they die, and observe all the morbid changes that autopsy reveals. There may be just as good courses as these at home, but I have not been able to avail myself of them, for I have not been able to find them. In the post-graduate courses I have taken in America, the teaching of internal medicine has been extremely disappointing, partly on account of its being simply didactic in character, no material being available to give it true clinical worth."

"Many of the teachers here in the Vienna school seem to have achieved their positions through some other consideration than their natural ability to teach, as in the case of Billroth, who was one of the most scientific surgeons of this century, but never was a good teacher. Hence, of late years, when I am in Europe I go to Paris for my surgery; not that it is better done there than here in Vienna, but because the French teacher in the school of medicine in Paris is generally a born teacher, explains every step of his operations and allows you, if possible, to see what is done. Then again American physicians are treated courteously in France, while in Germany, if you are not a Senn, a Murphy, or some other man of equal eminence, you are not likely to get any civilities that you do not pay for; in fact, they seem inclined to put us all down as the graduates of a Buchanan school or some quack institution."

The Coroner an Anachronism. Dr. Samuel W. Abbott, of Boston, writing in the *Philadelphia Medical Journal*, thinks that, with the lessening importance of the county organization in local government as compared with the growing importance of towns and cities, the coroner has become an anomaly. "The two county officers, the sheriff and coroner, were transplanted on our own soil

in the seventeenth century. Each of these officials is as old as the days of King Edward I. of England, and possibly older; but while the sheriff is a necessity and has grown to be an important executive functionary—much more so in the United States than he is in England—the office of coroner, on the other hand, as conducted at the present day, requires such incongruous functions as to make it a matter of wonder that every American state has not shaken off medieval incumbrance and adopted methods in harmony with modern progress."

In Dr. Abbott's opinion the defects of the coroner's inquest are (1) the combination in one person of two incongruous functions—law and medicine; and (2) the retention of the jury to decide upon technical questions which can be better settled by a single expert. The remedy advocated is as follows:

"Abolish the coroner and his jury by an act of legislature, and substitute in their place a corps of well-trained medical experts, whose duty it shall be to investigate all deaths by violence, and then report them to designated judicial authorities for further investigation, thus separating the legal from the medical function, and delegating each to its proper set of officials.

"If, as is the case in the State of New York, it happens that the coroner is a constitutional officer, then it becomes necessary to amend the constitution in order to get rid of him. It may happen, also, in many states, that the coroner has unusual political influence. In such cases, the more thoroughly the incongruity of his office and the needless expense of the jury are exposed, the better for the state and the whole community. Enlightened public opinion will lend its aid in accomplishing the desired end.

"As an example of the successful working of such an improved system, I need only refer to the experience of Massachusetts, which has had neither coroner nor jury for more than twenty years, during which time about 35,000 cases of violent, suspicious, and sudden deaths have been investigated in the most careful and thorough manner, and with much less expense than was possible under the old system. The radical overturn wrought by the enactment of the law of 1877, abolishing the coroner and his jury, has been one of the most satisfactory changes ever effected in the history of state legislation. Similar, though not so radical changes, were afterwards enacted in Rhode Island and Connecticut, with satisfactory results."

Professor Tarnier. A tribute has been paid by the Academy of Medicine to the memory of the late Professor Tarnier, who had been its president. Before adjourning its sitting as a mark of respect, the academy had previously listened to the oration, so simple and so just, pronounced by Professor Budin, the accoucheur of the Maternité, at the obsequies of his old master. It has also been decided that the clinic of accouchements shall in future be known as and called the Clinique Tarnier.

Moreover, it is probable that the municipal council of Paris will accede to the wishes expressed the other day by the medical collaborator of *Figaro*, in giving to the street of Paris near the Maternité the name of this great physician, thanks to whom the mortality of women in childbirth has fallen from ninety in one thousand to one-half in one thousand.—Paris Letter in *Medical Record*.

In Paris the physicians have sufficient sense of the proper mutual protection which is their right to publish a "black book" containing the names of would-be swindlers, and to refuse attendance on those who treat medical men disgracefully. Inhumanity cannot be brought forward as an argument in a large city well supplied with public charities, night service, quick ambulance system, and all other means of succor for those too poor or too mean to pay a doctor's fee.—*Medical Record*.

Medical Education in Olden Times. Dr. C. N. Ellinwood recently exhibited at the San Francisco Medico-Chirurgical Society a quaint old parchment illustrating the conditions attending medical study before the first medical college was established in this country. The place referred to in the document is twenty miles from Boston, Mass. It reads as follows (*Occident. Med. Times*):

This Indenture Witnesseth, That Hollister Baker, a minor, aged about sixteen, son of Mr. Edm'd Baker, late of Marlborough, in the County of Middlesex, gent, deceased. Of his own free will and accord, and with the consent of Benj'n Woods, of Marlborough, in county aforesaid his guardian, doeth put and bind himself to be an apprentice to Benj'n Gott, in the county aforesaid, physician, to learn his art, trade, or mystery, and with him the said Benj'n Gott, after the manner of an apprentice to dwell and serve from the day of the date hereof, for and during the full and just term of five years and four months next ensuing, and fully to be compleat and ended. During all which said term the said apprentice

his said master and mistress honestly and faithfully shall serve; their secrets keep close; their lawful and reasonable commands everywhere gladly do and perform. Damage to his said master or mistress he shall not willfully do; his master's goods he shall not waste, embezel, purloin or lend unto others, nor suffer the same to be wasted or purloined; but to his power shall forthwith discover and make known the same to his said master and mistress.

Taverns nor alehouses he shall not frequent, or cards or dice, or any other unlawful games he shall not play. Fornication he shall not commit, nor matrimony contract with any person during said term. From his master's service he shall not at any time unlawfully absent himself, but in all things as a good, honest and faithful servant and apprentice shall bear and behave himself toward his said master during the full term of five years and four months, commencing as aforesaid.

And the said Benj'n Gott for himself doeth covenant, promise, grant and agree unto and with his said apprentice in manner and form following, that is to say, that he will teach the said apprentice, or cause him to be taught by the best ways and means that he may or can the trade, art or mystery of a physician, according to his own best skill and judgment (if the said apprentice be capable to learn), and will find and provide for and unto said apprentice good and sufficient meat, drink, washing and lodging during said term, both in sickness and in health; his mother all said term finding said apprentice all his clothing, of all sorts, fitting for an apprentice during said term; and at the end of said term to dismiss said apprentice with good skill in arithmetick, Latin, and also in Greek through to the Greek grammar.

In testimony whereof, the said parties to these present indentures have interchangeably set their hands and seals the eighth day of January, in the fourth year of the reign of our Sovereign, Lord George ye Second, by the Grace of God, of Great Britain, France, and Ireland, and in the year of our Lord one thousand seven hundred and thirty-three-four.

Hollister Baker. (Seal.)

Benj'n Woods. (Seal.)

Benj'n Gott. (Seal.)

Signed, sealed and delivered in the presence of—

John Mead.

Elizabeth Woods.

THE Cleveland Medical Gazette

FEBRUARY, 1898.

Original Articles.

IMPERATIVE CONCEPT.*

BY B. B. BRASHEAR, A. M., M. D.,

Professor Emeritus of Clinical Medicine and Applied Therapeutics in the
Cleveland College of Physicians and Surgeons, Member of
the American Medical Association, of the Cuyahoga
County Medical Society, etc., etc.

The term *Concept* was in common use among the older philosophical writers in the seventeenth century, though like many other valuable expressions of these authors, it was overlooked for a period of nearly two hundred years by English lexicographers. Nearly the same fortune befell the term in France. It was in use by the old French philosophers, but waxed obsolete until the first part of the present century, when it was reinstated in its rights by the re-awakening of philosophy in that country. The later French writers, in translating from the German, not having in their own language an equivalent expression for *Begriff*, from *begreifen*, to grip, grab, grasp, necessarily adopted a term from the Latin *Conceptus*, from *concipere* (*capere cum*), to lay hold of. *Begriff* (Dr. Raue) means something that has been grasped together, corresponding the nearest to the Anglo-Latin term *concept*, and we understand by it a general idea or conception which is appli-

*Read before the Medico-Legal Section of the Cuyahoga County Medical Society,
November 19th, 1897.

cable to the whole class of apprehensions, or perceptions, of similar objects from which it was formed; whereas a perception is applicable only to the one single object of which it is the product. Concept is the evident logical English of the Latin *conceptus, id quod conceptum est, id quod terminat actum intelligendi*. Sir William Hamilton uses the expression concept to denote the object of conception, while he uses the term conception to denote the act of conceiving. "Whether it might not in like manner be proper," he says, "to introduce the term percept for the object of perception, I shall not at present inquire." Since his day, however, the term has come into elegant and general use by the logicians and psychologists.

Concepts are products of thought, like reasonings and judgments. Hamilton makes concept convertible with notion, and once only with the equivocal term, idea. He says we ought to distinguish between imagination and image, conception and concept; and were he writing to-day, he would say, between perception and percept. Imagination ought to be employed in speaking of the mental modification, one and indivisible, considered as an act, image and concept [and percept], in speaking of the mental modification, considered as a product or immediate object. In his Lectures on Logic, this entire subject is diffusely treated. Dr. Thomas Reid, the principal founder of the Scottish School of Philosophy, does not use the word concept. This is his language, "conceiving, apprehending, understanding, having a notion of a thing, are common words, used to express that operation of the understanding which the logicians call simple apprehension." The having a simple idea of a thing is, in common language, used in the same sense since Locke's time. Logicians define simple apprehension to be the bare conception of a thing without any judgment or belief about it. It may be observed that conception enters as an ingredient in every operation of the mind. Our senses cannot give us the belief of an object without giving some conception of it at the same time. No man can remember or reason about things of which he has no conception.

In every operation of the mind, therefore, in everything we call thought, there must be a conception. Hamilton thus comments on the foregoing: "Imagining should not be confounded with conceiving, apprehending, etc. The words conception, concept, notion, should be limited to the thought of what cannot be represented in the imagination."

Dugald Stewart, a pupil of Reid's, writes as follows: "By conception, I mean that power of the mind which enables us to form a notion of an absent object of perception, or of a sensation, which it has formerly felt. Conception is often confounded with other powers. Conception implies no idea of time whatever. It corresponds to what was called by the schoolmen apprehension. It is frequently used as synonymous with imagination. The business of conception is to present us with an exact transcript of what we have felt or perceived. In common discourse we often use the phrase thinking upon an object, to what I call the conception of it." The word concept is not found in Stewart's works.

This from Kant in his Critique of Pure Reason: "The understanding is the faculty of thinking, and thinking is knowledge by means of concepts, while concepts as predicated of possible judgments refer to some representation of an object yet undetermined."

In his learned work on Modern Physics, the scholarly Judge Stallo, of Cincinnati, has an instructive chapter on Concepts, from which we gain nothing particularly relevant to our theme.

Dr. James Sully makes concept interchangeable with notion. Hyslop says: "Technically, a concept may be defined as a synthesis of precepts, or a synthesis of individual wholes, to form a general notion. Idea, notion, concept are convertible terms."

Whately, Whewell, Preyer, Nathaniel Holmes, G. H. Lewes, Schopenhauer, the founder of pessimism; Romanes, Hegel, all writers of high repute, afford nothing of special utility for the purposes of this discussion.

Prof. Noah K. Davis, in his Elements of Psychology,

treats the subject of concepts with clarity and simplicity. He says a concept is a result of the act of conception, or the act of grasping together the various marks which characterize an object. A concept is a union of marks in one notion, or we may say a concept is a bundle of marks. He quotes Esser's definition: "A concept is the representation of a thing through its distinctive marks." Hence, he says, in this way one forms a notion of historical characters. In like manner, every man forms a notion [concept] of himself, which, however, may be quite erroneous. D. H. Tuke's definitions: "Concept — the object of a mental conception, the object conceived by the mind, a notion. Conception—the abstract idea of a thing in the mind, also the power of conceiving in the mind." *Outlines of Logic and Metaphysics*, a new work by Prof. Johann Edward Erdmann, of Halle, is a brief and masculine analysis of the method of thought. It is a text-book, and the sort of book not read out of schools. But any one who feels that the helter-skelter of practical life has dulled his thinking, will find a sharp tonic stimulus in its pages, *e. g.*: "The determined or concrete concept, as the universality which is in particularity identical with itself, is the unity of genus and specific difference, is inner essence, as it specificates itself in external phenomenon without becoming lost therein."

Raue writes: "There remains in the soul a vestige of all we perceive with sufficient clearness, and all similar vestiges unite into one aggregate. A concept or abstraction is therefore the combination of the similar elements of different perceptions into one act of consciousness. This new combination remains as a vestige; and thus we gain by degrees from single concrete perceptions, concepts of whole classes of individual objects."

Pausing to reflect upon the various inharmonious and conflicting definitions as quoted, I fully appreciate the purport of the sober warning of that ever distinguished physicist, Sir Isaac Newton, when he pensively said: "Beware of the metaphysicians." Shakespeare, the greatest genius that ever touched this grain of sand and

tear we call the world, was well acquainted with morbid psychology and fond of delineating it. In all his matchless fecundity of speech, however, he did not use the expression concept, probably because it had not been brought over from the Latin during his time. He employed the term apprehension as of like import, and with what perfect aptness and poetic elegance these seemly extracts do abundantly show:

"Lovers and madmen have such seething brains,
Such shaping fantasies that apprehend
More than cool reason ever comprehends."

"Such tricks hath strong imagination
That if it would but apprehend some joy,
It comprehends some bringer of that joy."

"Who can hold a fire in his hand,
By thinking on the frosty Caucasus?
Or cloy the hungry edge of appetite,
By bare imagination of a feast?
Or wallow naked in December's snow,
By thinking on fantastic summer's heat?
Oh no! the apprehension of the good
Gives but the greater feeling to the worse."

We note the accurate and happy use of apprehend and comprehend and fantasy and imagination and thinking on.

Webster defines concept as "An abstract general conception; a notion; a universal. The words conception, concept, notion, should be limited to the thought of what cannot be represented in the imagination, as the thought suggested by a general term convertible with conception." The Imperial Dictionary gives concept as the subject of conception; the object conceived by the mind; a notion.

Century Dictionary. — Word concept: "A general notion; the immediate object of thought in simple apprehension. Conception is applied to both the act and the object in conceiving; concept is restricted to the object."

Standard Dictionary. — "Concept: A general (or generalized) notion or idea, embracing all the attributes common to the individuals that make up a class, distinguished

both from the phantasm or image and from the percept, which are individual and concrete, while the concept is general and abstract."

Allan McLane Hamilton, in *Legal Medicine*, enunciates the following: "When a perception has been recognized and remembered it becomes a concept, or idea; and when comparison is made and the process of reasoning takes place, a judgment is arrived at."

Imperative means authoritative; peremptory; not to be shunned or shirked from; obligatory or exacting; strictly binding, as an imperative necessity.

Foster's *Encyclopedic Medical Dictionary* gives Imperative Concept thus: "In psychiatry, a general term for a class of ideas which manifest themselves to the minds of lunatics, and which even to them may appear absurd or improper, but which cannot be driven out, and may explode in the most violent action."

Gould's *Dictionary of Medicine* has this definition: "Concept, imperative, a false idea that an insane person dwells upon, and which he cannot expel from his mind even when he knows it to be absurd, and which dominates his actions." Also Gould: "Idea, imperative, a morbid idea or insane suggestion, demanding notice, the patient often being painfully conscious of its domination over his will." McLane Hamilton discourses thus in *Legal Medicine*: "Insistent and imperative concepts mark a species of mental weakness in which the patient's conduct is more or less strongly influenced, he often being able to realize the domination of his affliction. Sometimes this realization is lost and the morbid influences gain possession, so that in a condition of high tension he commits some act which is followed by subsequent repentance and distress. A number of names have been applied to forms of mental weakness of this kind, and they may extend from the lower form which may be called doubting insanity, or *Grübelnsucht* of the Germans, to serious reasoning and insanity." The impulse which one feels when tempted to jump from a height, or to use some dangerous weapon which may be at hand, is an instance of imperative con-

cept of a low order. Pertinent on this point is Dugald Stewart, who knew nothing of the imperative concept under such concise designation. He says: "During the representations of a tragedy, we have a general conviction that the whole is a fiction; but I believe it will be found that the violent emotions which are sometimes produced by the distresses of the stage take their rise, in most cases, from a momentary belief that the distresses are real. I say, in most cases, because I acknowledge that, independently of any such belief, there is something contagious in a faithful expression of any of the passions. The emotions produced by tragedy are on this supposition. Somewhat analogous is the dread we feel when looking down from the battlement of a tower. In both cases we have a general conviction that there is no ground for the feelings we experience, but the momentary influences of imagination [insistent concept] are so powerful as to produce these feelings before reflection has time to come to our relief."

In considering those sudden outbursts of passion which lead us to wreak our vengeance on inanimate objects, we have in such cases a momentary belief (imperative concept) that such objects are alive. "I confess," continues Stewart, "it seems to be impossible that there should be resentment against a thing which at the very moment is considered inanimate, and consequently incapable either of intending hurt or being punished. There must, therefore, I conceive, be some momentary notion or concept that the object of our resentment is capable of punishment. Men may be governed in their practice by a belief which, in speculation, they reject." Those impressionable people who hear noises in the night, who see ghosts and air ships, who hold converse with the spirits of the dead, who dread to walk under a ladder, or to pass by a graveyard at night, the while whistling my uncle Toby's *lillibullero* to beguile the *banshee*, are subjects of the Imperative Concept.

McLane Hamilton states that many of the cases of so-called moral insanity are, after all, nothing but a disorder

characterized by insistent and imperative concepts. Certain insane acts may lead to the commission of others by patients of this kind with imitative tendencies, and this explains the epidemics of crime which occasionally occur whenever some particularly dramatic or widely advertised horrible sensation has taken place. Maudsley and Clouston do not use the term imperative concept in their classifications, but they quite fully and clearly discuss all that it includes under the different grades and phases of insanity. I have not been able to find out who invented the expression and first introduced it into psychiatry. An exhaustive treatise on the subject would be a history of the human race.

Clouston says that the want of the power of self-control is so very common a thing amongst mankind, that to some extent and in respect to some matters it may be regarded as the normal condition of our species. A perfect capacity of self-control in all directions and at all times is rather the ideal state at which we aim, than the real condition of any of us. The men who have attained this state of inhibitory perfection have been few and far between, and even in regard to them it may be said that they, too, would have lost their self-control had they been exposed to sufficient temptation and irritation. "There are none that doeth good, no not one." At present, I can only call to mind a single representative of the ideal state, and that is the late William Ellery Channing, who, in his declining years, found occasion to say, "I never killed a bird, and I never knowingly stepped upon a worm in my path." This from Tuke: "The form which imperative ideas may assume, while primarily mental, may be either motor or sensory. Passing from the motor and sensory manifestations, we have the thoughts which are poured into the mind in opposition to the person's will, those imperative conceptions or intellectual impulses which are more especially recognized as falling under the title of this article, imperative concepts or ideas. Morbid suggestions and ideas imperiously demanding notice, the patient being painfully conscious of their domination over his wish and

will, and very frequently having a hereditary predisposition to insanity, characterize the victims of the concept imperative. For a considerable period alienists have felt the importance of differentiating between imperative ideas with retention of sanity, and delusions or fixed ideas. That there is some derangement of the mental machinery in consequence of which certain thoughts or words dominate the wish and will of the individual, cannot be denied; but there is a marked difference between the man who is conscious of the undue prominence of certain involuntary ideas which do not amount to insane beliefs, and the man who holds delusive ideas and whose conduct is influenced by them. A large number of words have been coined to express the special form which the obsession has assumed. Some of them are Astrophobia, Acrophobia, Agorophobia, Chlithrophobia, Phonophobia, Oicophobia, Zoöphobia, Hydrophobia, etc., *ad nauseam*."

Dr. Edward C. Spitzka, who testified in the Guiteau case in opposition to A. McLane Hamilton, has this to say: "There are certain mental phenomena, reflections, and suspicions, differing from delusion, in that the patient is able to reason himself out of them and to recognize their absurdity at times, which tyrannize his thoughts and sometimes his acts as markedly as the most firmly rooted, organized, insane idea. These phenomena arise suddenly, without any obvious connection with previous thoughts; they appear like spontaneous explosions of some uncontrolled segment of the nervous system, and are aptly called imperative conceptions [concepts]. The imperative conception leads to the imperative act. But the imperative act is directly determined by the overpowering conception suggesting it, and is not the result of linked reasoning as the morbid project is. In some instances the same morbid impulse recurs again and again and continues throughout the life of the patient."

Under Insane Impulse, Maudsley holds as follows: "An inability to control it may be accompanied by a consciousness of its morbid nature. The patient is governed by the strangest association of ideas and feels himself

irresistibly impelled to do what his reason disapproves and his moral feeling abhors, aghast at himself the while."

Dr. C. H. Hughes, of St. Louis, than whom there is no higher authority in psychiatry, writes the following: "The insane display with their delusions many morbid states besides their delusions, some of which are clearly comprehended by the general practitioner and some are not, and even the mind of the skilled psychiatric clinician and experienced student of medico-legal alienism is not always clear upon all these states. Among the data of alienism, the morbid impulsions of the homicidal, suicidal, pyromaniacal, kleptomaniacal, and the perverse inclinations and acts of the reasoning or affective insane, are well enough known to psychiaters. These, as well as singular aversions and freaks of speech, feeling and conduct, are recorded in the literature of insanity. But the imperative conceptions of the insane, independent of delusions as evidence of mental unbalance, were questioned in the Guiteau trial, and are still doubted by some eminent authorities."

Dr. Hughes reports a typical and conclusive case, that of a woman descended from an irreproachable and upright ancestry, being the daughter of a distinguished English-speaking divine noted for his probity and piety, and she herself a Christian church member hitherto noted for her religious fervor and zeal and indefatigable church work. She writes a letter:

"Dr. Hughes:—I write to know if you thought it would do me any good to take medicine at home; that is, if you could send me some without me going to see you. I am not well by any means, and yet I am not sick. You said for me to quit swearing. I can't; would that I could. I go about my work crying and talking. I will say, 'Well, I just will not do that any more,' and it will not be five minutes until I will be at it again. It seems to me I have done awful deeds and they follow me, or that I am possessed of evil spirits and can't get rid of them. I think and say such awful things. I never did so before, and do not believe I want to now. It is not con-

venient for me to go to St. Louis so often, and I do hate giving up being cured. If you will oblige me, write and tell me what you think. Direct to M. M. A."

Dr. Hughes says: "When such imperative conceptions pass the boundary line of normal restraint into the uninhabitable realm of mental aberrations and become resistless expressions and acts violative of the properties and normal restraint of environment and have a recognizable disease for their basis, we class them as evidences of insanity. The mental state is that of insanity, and the condition is only a question of degree, for here is ill health affecting the brain and a change of natural character out of harmony with natural self and environment, as a consequence,—and this is true mental aberration."

But imperative conceptions and apparently resistless impulses are not *per se* evidences of insanity. Confirmative of this assumption there are instances innumerable, such as Dr. Johnson's habit and peculiarity of touching and counting the palings of a certain fence, so often passed by him. Similar cases probably come within the recollection of every observant and reflecting person.

Children are peculiarly the subjects, or victims, of imperative concepts. They are prone to acts of disobedience from many causes. They transgress and impulsively violate the injunctions of parents and teachers, full well knowing the wrong they do, as well as the penalty that follows their wrong doing. Many children are liars and thieves imperatively, when their own comfort and personal aggrandizement are in the scale. Upon a certain occasion a bright ratiocinative youngster was caught in the act of raiding his mother's pantry. A reprimand was given and an explanation demanded. As an apology and defense for the acknowledged wrong he was doing the embryo metaphysician answered, "I didn't go to do it; I couldn't help it." But said the mother, "Why couldn't you help it? You have always been taught better." Then the culprit, after the example of his elders, came with the theological and biblical excuse, "Satan tempted me." The mother: "You ought to have said, 'Get thee

behind me, Satan.'" To which the boy answered—"I did say so, but—then he pushed me."

Eve was once upon a time beleaguered by the concept imperative, as the record abundantly proves. When the woman saw that the tree was good for food and that it was pleasant to the eyes and a tree to be desired, to make one wise, she took thereof and did eat (insistent concept, intention, and effort, with fruition). Cain yielded to the dominative influence of the imperative concept, in that his brother had dealt unfairly with him, that he had in some way surreptitiously secured the award in the matter of their respective, diverse exhibits; and in a heated altercation over the affair he impulsively smote Abel; not however with malice aforethought, or from any previously formed purpose to slay him; but, unfortunately, the unmeasured force of the blow resulted in the first recorded death.

From that time to the present in countless instances, and in like manner, has death been caused; a notable instance being that of Professor Webster and Dr. Parkman. While Achan of Achor was curiously inspecting the rich booty taken by the Israelites at the fall of Jericho, his wistful eyes fell upon the treasure. All of a sudden, as with the *Blitzen-Krankheit*, he was seized with an uninhabitable attack of covetousness which culminated in the supremacy of an Imperative Concept, whereupon he purloined the ingot of gold and the shekels of silver, which he adroitly concealed in a costly Babylonish cloak, also stolen, and hid away in the earth in the midst of his tent. Achan of Achor was the original bimetalist, and his unblest and hapless fate stands as a solemn warning in this *fin de siècle*. When David, in his nocturnal perambulations about the corridors and promenades of his capital, discovered Bethsheba in the hygienic act of performing her periodic ablution, a sudden blight fell upon his exertive faculties, inhibition and conation were alike utterly paralyzed; whereupon, overslaughed by an imperative, insistent, persistent concept, impelled by an impulse most potential and altogether irresistible, he peremptorily

decreed that Uriah should, forthwith and without delay, be detailed to a conspicuous position in the pending siege of Rabbah, where he might achieve enviable renown for valorous conduct in the face of the foe, in the hottest of the battle. Peter, when confronted by the alert and scrutinizing maid, as he mingled with the *canaille* in the court of the Judgment Hall, met her accusation that he was a suspect with a vehement denial, even intensifying his denial with coarse and unseemly profanity,—and this under the spell of an imperative concept that his own life was in jeopardy. St. Paul gracefully and fearlessly confesses his subjection to the insistent concept in this beautiful and touching declaration: “The good that I would, I do not; but the evil which I would not, that I do.” Lord Nelson most ungraciously surrendered to an imperative, irremediless concept in a shameless and indefensible *liaison* with that common, brazen woman, Lady Hamilton, in contrast with whom Nell Gwyn was a very queen. Much of the life of that erudite, brilliant and wayward man, Junius Brutus Booth, was dominated and embittered by imperative concepts. His home was on a farm near Baltimore, in a wooded, romantic solitude, away from the abodes of men. On that domain he forbade the use of animal food, and would permit no living creature, not even a reptile, to be killed. He was the victim of dark moods; in the language of Blandford, of obsessions and besetments; was given to wanderings in the woods; made midnight rides in the dresses of Richard or Hamlet; kept funeral ceremonials over dead animals and birds; had compassionate sympathy with vagabonds; indulged in mysterious disappearances; could read the Lord’s Prayer in such a pathetic way as to convulse his hearers with irresistible emotion; and upon the stage his terrific outbursts of passion were wont to make his colleagues tremble for their lives. When from time to time he emerged from his headquarters at Belair, it was to dazzle and astonish mankind by his matchless histrionic attributes. Often when playing Shylock he was seen scrupulously to scrape off the slices of ham from the sandwiches provided for his

refreshment between the acts. He was the father of the malevolent paranoiac and vindictive presidicide, John Wilkes Booth.

It may be reasonably contended that a *raison d'être* for the expression imperative concept is the fact that it is a most suitable one to denote the mental state of those persons ordinarily considered sane, who do wrongful, hideous, and outrageous acts out of all harmony with their environment; while for the insane who do like deeds may be reserved the older and commoner expressions such as morbid impulse, emotional insanity, impulsive insanity, etc.

Irresistible impulses are recognized by all philosophers, sacred and profane. Who among us can retrospect his life and not find it at some period tarnished with repulsive wrong-doings and unrighteous deeds, and the grossest sins, that can only be imperfectly accounted for by assuming the despotism of the Insistent Concept? Who is free from that taint of evil in human nature which has made and which will perpetuate the warp in human affairs, and which renders invariable and long-continued happiness impossible to man?

Were I to indite an autobiography for the edification of this society and in substantiation of the resistless tyranny of the Imperative Concept, I would a narrative rehearse that would most conclusively verify the trenchant aphorism of Professor Van Norden: "One man in every ten is insane; every man is one-tenth insane." *Ex uno disce omnes.*

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A LARGE VAGINAL CYST.*

BY WALTER R. LINCOLN, A. B., M. D., CLEVELAND,

Assistant Gynecologist to Out-patient Department, Lakeside Hospital.

I wish to report a case that has been of much interest to myself, and one upon which I shall be glad to have comments from the members of the society.

The patient, Mrs. H., aged 25, white, dressmaker, was referred to me by Dr. J. E. Cook, one of my colleagues in Cleveland. She was sent to St. Vincent's Charity Hospital in December, 1896. Her history is as follows:

She has been married 6 years, has had one child, born in December, 1894, and one miscarriage occurring spontaneously in August or September, 1896. The menses began at 13½ years, from that time on were always regular, never painful; lasted about three days, moderate in amount. Leucorrhea occasional, slight in amount. Bowels were always regular, but since birth of child until after the operation, the feces were passed with difficulty and the passage was accompanied by more or less pain. There was a constant sensation as though a foreign body were in the rectum. Patient felt, when her bowels were about to move, as if something in the rectum prevented the passage of the feces. Micturition presented no difficulty.

On admission she complained of dragging sensations in the loins and back and the protrusion of a large mass through the vulval orifice. The protrusion was first noticed six weeks after the birth of her child and was then about the size of a "hickory-nut." Since that time it had grown progressively larger. At the examination under anesthesia, Dec. 28, 1896, the following note was recorded:

The outlet is considerably relaxed and the posterior vaginal wall is prolapsing through it. The rectum is implicated in the prolapse to a considerable extent, but not nearly so much as one might have expected, judging from the size of the protruding mass, which is as large as the

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clenched fist. This can be replaced within the vulvar orifice, but the prolapse recurs promptly on straining. The recto-vaginal septum appears quite thin. The cervix is small, with superficial bilateral lacerations, the tear being deeper on the right side, where a small patch of Nabothian follicles is situated. The cervix points toward the sacro-coccygeal joint. The fundus uteri is enlarged, freely movable, somewhat sensitive to pressure, and lies $1\frac{1}{2}$ inches above the symphysis pubis. The right ovary, small and freely movable, is found high up near the right pelvic wall. The left ovary, larger than the right, is somewhat irregular in outline, is freely movable, and lies about 1 inch from the left utero-tubal junction. Both tubes can be palpated, but indefinitely.

The treatment consisted in dilatation and curetting, a small trachelorrhaphy, requiring but three catgut sutures on either side of the cervix, and finally an Emmett's perineorrhaphy.

In the course of this last operation it was found impossible to dissect the median V-shaped flap away from what appeared to be the rectal ampulla beneath it. A small opening was unintentionally made in this tissue at the base of the flap, and from this several ounces of a homogeneous, yellowish, slimy fluid exuded. It was determined at once that the rectum had not been wounded, and on enlarging the accidental opening it was seen that a cyst the size of a tennis ball had been entered. On examination the sac of this cyst was found to run up the vagina in the median line and to either side for about 2 inches from the introitus. The sac was so intimately connected with the vaginal tissues and the rectum, and the recto-vaginal septum, together with the sac wall, was so thin that complete excision of the latter was impossible. It was found, however, that the internal secreting surface of the cyst could be readily removed, partly by peeling and partly by means of the curette. This maneuver was carried out and the operation concluded as a perineorrhaphy, the raw surfaces which were opposed to each other being partly made up of the cyst walls. The

sutures were so placed that, should any discharge accumulate, it could drain away at the apex of the V-shaped flap.

The vaginal entrance was properly narrowed. Two silkworm-gut sutures were used internally in the lateral fornices and 3 externally. A number of medium-sized catgut sutures were placed internally and externally.

VI.-24-'97. *Examination.* Very good result. Perfect muscular control at the vaginal outlet. The cervix is in good position. No aches or pains complained of. Has gained 31 pounds since entrance to the hospital. Had a spontaneous miscarriage about three months after she left the hospital, at about the seventh week of pregnancy.

X.-30-'97. *Examination.* Essentially as above. No signs of any return of prolapse.

Vaginal cysts of such size are certainly somewhat rare. I have seen one other case in Cleveland in several years, but unfortunately have lost sight of the patient. The cyst was considerably smaller than in the present case and its walls were much tenser. Smaller vaginal cysts are probably more common.

I wish to call attention to the fact that the presence of the cyst was unsuspected by me until I had unintentionally opened into it. You will notice that in the description of the case I said that the recto-vaginal septum appeared very thin. Yet the cyst had developed in this structure. It was about the size of a tennis ball, and it may seem as though its presence should have been readily recognized, especially as its lower half was located in the area embraced in the operation for perineal repair. The reason why it was quite excusable to overlook the cyst lies in the fact that it was so loosely filled and its walls were so lax that they could be brought together without any apparent resistance. Its walls were so intimately connected with the anterior and lateral rectal walls and with the vaginal tissues, and these were so thin, that it was impossible to dissect the cyst out, and I had to be content with scraping and peeling out its mucosa.

I am sorry that the tissues removed were unfortunately lost and that I am therefore unable to report upon the histological structure of the cyst.

The literature on this subject up to 1887 has been well gone into by G. W. Johnston in a paper in the *American Journal of Obstetrics*, vol. xx., 1887, p. 1121. He reports one case of his own in which there were four cysts situated in a line on the antero-lateral surface of the vagina. These, he believes, originated from the canal of Gärtner.

Sir Astley Cooper is said to have been the first to recognize and describe vaginal cysts, although Haller, in 1765, wrote concerning "hydatids" of the vagina, which were possibly cysts. Although most observers agree that such cysts are rare, the statistics upon this point vary very much. Thus, Johnston found one case in 500 women examined. Gurlt found 3 cases in 11,140 women examined. Neugebauer found 50 cases in 20,000 women examined. Breisky saw but 8 cases. Neugebauer believes they are present in 2 women out of every 100 examined.

They are commonly found in the lower third of the vagina and decidedly more often on the anterior than on the posterior wall. They are usually of quite slow growth, but any cause which brings about an increased blood supply or an irritation in the tissues may accelerate the rate of growth. Pregnancy and childbirth may cause the cyst to increase rapidly in size. They are generally sessile; the formation of a pedicle is to be regarded as a secondary process. They usually possess a distinct cyst wall and a lining layer of epithelial or endothelial cells. The epithelium in some of the cysts is of the single layer columnar non-ciliated type; in others it resembles that of the vagina; in others both types are to be found in the same cyst. This last fact has been demonstrated by Ruge, of Berlin. Some cysts are lined by endothelium.

Theories as to their origin.—Von Preuschen believes that vaginal cysts are merely retention cysts caused by the obstruction of the vaginal glands. He describes these

vaginal glands, and quite a number of authorities support him in his belief as to the existence of such structures in the vagina. The weight of authority is, however, probably against their existence. Von Preuschen's explanation is an ingenious one and serves well in accounting for the presence of the different sorts of epithelial lining found in these cysts.

Freund suggests the possibility of the origin of these cysts from a portion of an imperfectly developed Müller's duct. He cites a case of his own in which several cysts were developed partly from Gärtner's canal and partly from Müller's duct.

Froment believes that the cysts are caused by a retention and increase of secretion in adventitious cyst cavities formed in the depression between the agglutination of the crests of two or more adjacent folds of the vaginal mucosa.

Veit believes that in most cases these growths are really due to a cystic distention of a part of Gärtner's duct. He says that in quite a number of female subjects examined by him he was able to demonstrate larger or smaller remnants of these canals. He has traced them down as far as the junction of the lower and middle third of the vagina. Occasionally he found that for a short distance the lumen was plugged by collections of epithelial cells. He believes that these obstructed portions of the ducts may readily give rise to cysts.

Some authors believe that Skene's tubules in the urethra represent the external openings of these canals of Gärtner. Other theories have also been put forward. Some authorities believe that many of these cysts arise from dilated lymph spaces, and the presence of an endothelial lining in some of the cysts tends to bear out such an explanation of their source in such cases.

In this connection the article of Fr. Neugebauer in the *Revue de gynécologie et de chirurgie abdominale* for July-August, 1897, in which he relates his experience with 50 vaginal cysts, is of great interest. He says that from the smallness of the number of cases which one finds described

in the text-books one might think that they are of infrequent occurrence. He has, however, observed in 13 years, 50 cases in 20,000 patients. He thinks we find 2 or 3 of these cases in every 100 women and that these cysts are frequently missed in the ordinary examinations. Again, patients do not as a rule make any complaint until the cysts become of some size and thus produce some inconvenience. He believes that if we examined our cases more carefully the percentage in which this condition exists would be higher than 2 or 3 per cent. of women examined. Forty-six of his cases were cysts of the duct of Gärtner; 4 were what he calls secondary vaginal crypts. In only one case was the cyst found in the posterior wall of the vagina. He explains the so-called vaginal crypt as being due to rupture of a cyst from traumatism.

Most of these cysts can be best demonstrated in the knee-breast position, as most of them involve the anterior wall of the vagina, and in this way their exact size can be well seen. At times the eversion that the cyst produces of the vaginal wall will at first sight suggest a prolapsus of the uterus, a colpocoele, or a polypus. In many cases these vaginal cysts are pedunculated, but it goes without saying that the formation of the pedicle is a secondary matter. In some cases the cysts have ruptured and after some time a crypt of the vagina forms, as had occurred in five of his cases. These crypts produce a sort of diverticulum in the vagina, but they are not covered by the mucous membrane of the vagina. He says that he has never been obliged to curette these cysts, as had been recommended by Fritsch. Sometimes many of these cysts are found in the same woman. In some cases the cyst is filled with blood and in others purulent inflammation occurs.

Forty-eight of Neugebauer's patients were married and in eighteen sterility existed, but he does not think that in any of the cases the cyst was an obstacle to fecundation, though he does not doubt but that if a very large cyst is present it might prove to be a cause of sterility. He found such a cyst in one case in a young girl, in an-

other in a new-born child. He advises excision of a part of the cyst wall. Sometimes after such excision he cauterizes the internal cyst surface with tincture of iodine or nitrate of silver. He does not believe in simple puncture of the cyst, holding that suppuration may follow as a consequence, or the cyst may fill up again.

As regards my case, I am unwilling to speculate as to the origin of the cyst. I am of the opinion that cysts may develop in cases of rectocele or vesicocele, if there be much rubbing of the tissues against the clothing or person. In other words, I believe that some of these cysts are probably adventitious bursæ.

THE FIRST CARE OF BABY.*

BY D. S. HANSON, M. D.,

Obstetrician to Cleveland City Hospital.

This subject, at first thought, would seem to need no essay before a body of medical men, for baby has been cared for, lo! these thousands of years, and probably the average method has been about the same century in and century out, and as a rule pretty well understood and done. But sometimes, and not unfrequently, the physician has been like the competent druggist and chemist who sold morphin for quinin; he understood his business well, but was negligent and careless in its application. The physician here is too apt to leave to some old woman or other incompetent person that which he should himself at least superintend.

Herbert Spencer defines life as a proper adjustment of the internal parts of the plant or animal to its external surroundings. And we take it that baby's first squall is a notification that he is not pleased with his environment,—and no wonder, when we bear in mind that in intra-uterine life he has experienced no change of temperature, while now the drop is from 25° to 40° F., which certainly must be a great shock to baby and should be avoided as

* Read before Ohio State Pediatric Society, Cleveland, May 19th, '97.

far as possible. A warm flannel blanket is not usually very difficult to procure, yet it is not at all uncommon to see baby wrapped in an old apron or napkin.

He may be cold, trembling, chattering, and blue, yet this often occasions little alarm. I suppose it is a part of the *toughening process* that is fitting him to fight the battles of life, but is much more likely to produce catarrhal processes that will help some one else. Preparation for the washing goes on and if done in the usual manner with soap and water is often simply a prolongation of the exposure. A popular fad among women is that the first washing must be thoroughly done and baby shivers on while the painstaking search for vernix caseosa proceeds. Have I overdrawn this? I think not, for I have witnessed it myself many times. Diseases of the respiratory tract are much less liable to attack the individual later in life if he has had healthy development during the first few weeks of his existence. That a mucous membrane once inflamed is ever thereafter more susceptible to irritants I believe to be a fact. If, while the doctor is delivering the placenta, examining the perineum, vagina, and cervix for lacerations, he will at least superintend the washing, baby will fare better and the mother none the worse.

Time of tying the cord I hesitate to speak about, yet many a baby would have had a few more ounces of blood to start his extrauterine career with had the attendant not been in too great haste in severing the cord.

The kind of string used is another matter of some importance. A number of years ago the writer attended a confinement in which mother gave birth to twin babies; the ladies present had prepared string for tying cord by twisting several strands of sewing thread; both cords were tied with this ligature. In about an hour I was called and found that one cord was bleeding, child had lost a large quantity of blood, and died of marasmus a few weeks later. The threads had not all drawn with equal tightness, one had cut through the coat of an artery.

The dressings used on the cord is a matter of no small importance. Animal fats of all kinds only favor

decomposition and should never be used. In a number of instances I have been called to see babies suffering from what midwives called "nine-day fits," and in every instance found a large fetid cord still adherent, and in every case the child died. No doubt many gentlemen here present have observed the process of atrophy and separation of the cord in domestic animals without the formation of a minim of pus, yet the notion that the cord must ulcerate off is dominant to-day; it does usually ulcerate, but if kept clean would separate without. Nothing certainly is easier than to use dry sterile dressings.

Another thing that often makes babe very uncomfortable is too tight application of the so-called belly-band. In a number of instances first and last upon subsequent visits to mother and child complaint has been made of baby's restlessness, moaning, and difficult respiration, which speedily disappeared after loosening the binder and allowing free movement of diaphragm. Care of eyes is well understood and carried out by the profession.

Last but not least, what shall baby have to eat prior to the time he gets milk from the breast? Quite a number of years ago I heard an old physician, one that had had a very large obstetric practice and was a most thoroughly competent man, say "that he had little trouble with cross babies." The reason he gave was that he gave them nothing except what they obtained from the mother's breast except a little tepid water. He said the babe did not suffer for want of nourishment, and he believed he was doing what was natural and right.

After quite an experience I am compelled to agree with him, and usually give some very weak catnip tea or its equivalent, partly to satisfy baby, but more to gratify the attendants. That cow's milk, however much diluted, causes colic when given at this time, and that one and all the baby foods are worse than useless, I firmly believe to be a fact.

My criticisms of what is being done to and for baby may seem to some as rather severe. To those I wish to

say that I have tried to stick close to facts. In closing, I may say in summary: 1. Do not expose baby after birth to a greater change of temperature than is absolutely necessary. 2. Do not allow attendants to subject him to prolonged exposure while washing, but rub him over with lard (this usually being convenient) and quickly wipe him off and wrap him up warmly. 3. Do not use too fine a thread in tying cord, and dress the same with dry, sterile dressings. 4. Give nothing but tepid water or some very weak aromatic tea until there is sufficient milk in mother's breast for child's requirements. 5. Notice clothing and see that the abdomen and chest are not constricted thereby.

I feel certain that by following these simple rules much pain and worry to baby will be avoided and an equal amount of satisfaction felt by the physician and all concerned.

PELVIC ABSCESS.

BY N. STONE SCOTT, A. M., M. D., CLEVELAND,

Consulting Surgeon to the City Hospital, Consulting Surgeon to St. John's Hospital, Surgeon to the Out-patient Department, Cleveland General Hospital, etc.

Gant describes a blind fistula as one which "consists of a sinus that does not have any external communication, but an internal opening into the rectum" (Gant, page 75). "Inflammation starting in neighboring organs may extend to the rectum" (Dennis, V. II., p. 507) and set up a proctitis; in this case the internal fistula "may, in many instances, be very difficult to diagnose" (Gant, p. 75).

"Cellulitis is essentially an acute or subacute disease as well as a secondary disease. It rarely occurs in the pelvis as a primary disease, and is just as rare as a chronic condition, except in the form of an abscess, which is not common. The abscesses and masses in the pelvis formerly looked upon as cellulitis are almost without exception contained within the peritoneal cavity. In acute puerperal cases the infection, at times, extends by way of the lymphatics directly into the cellular tissue, and

results in the formation of a true cellulitis and a true primary cellular tissue abscess. Examples of such cases must be of exceedingly rare occurrence" (*Text-Book of Gynecology*, p. 462). The author of the chapter on pelvic inflammation in the *American Text-Book of Gynecology* says: "In no case, except in suppurating cysts, has a pelvic abscess been observed which was not intraperitoneal, in the sense that it had originally developed in the peritoneal cavity" (p. 463). One such case of true primary cellular tissue abscess has come under the observation of the reporter, and will at some future time be reported more in detail.

"These pelvic abscesses are extremely apt to burrow their way to the surface and discharge their contents in a more or less irregular manner. They have been known to empty themselves into the rectum, vagina, and bladder. The umbilicus, the saphenous opening, the pelvic floor, the labia, the pelvic foramina, have all served as means of passage for the pus" (*Text-Book of Gynecology*, p. 463). Skene reports a case of pelvic abscess which discharged through a large bronchus (Skene, page 557).

"The spontaneous evacuation of pus by any of these sources, although a portion of such cases go on to a good recovery, is a disaster, and the danger of such a result is one of the clearest indications for the adoption of vigorous measures to ensure its prevention. The usual course of a case after such a mishap is a prolonged convalescence—just as commonly a long invalidism, followed by death" (*Text-Book of Gynecology*, page 463.)

"The vagina is the natural route for the evacuation of all intrapelvic collections of pus" (Dennis, V. II., page 776).

"When the opening is low down and enters the rectum obliquely downward, and the drainage is complete, the opening will close promptly; but if the opening into the rectum is directly or obliquely upward the contents of the bowels will escape into the abscess sack, or if the suppurative process breaks the mass down in a number of

places, and small abscesses open into each other and into some of the pelvic viscera, by one or more openings, the suppuration will keep up for an indefinite length of time," and the patient will go from bad to worse (Skene, pages 557-558). This occurs when the walls of the abscess happen to be so thick that they cannot be brought into contact, or when its cavity cannot be reduced after the escape of its contents. The whole interior then becomes a pus-secreting surface, and the disease proves a serious hindrance to the recuperative powers. Under no other circumstances does a woman show to greater advantage her natural tenacity of life and powers of endurance. Emmet says: "I have seen this drain kept up for two years, and with a degree of hectic and emaciation unequalled in the course of any other disease, and yet recovery took place" (Emmet, p. 272). As a result of neglected pelvic suppuration, "if the appendages are involved in the suppurative process, as they most frequently are, the sinuses will remain open in spite of all that may be done by way of medical treatment." The treatment of such cases is unpromising. Abdominal section with removal of the abscess sac is the only alternative, however bad the case may be" (Text-Book of Gynecology, page 516). "Should the opening be into the bladder or bowel, the edges of the perforation are to be carefully prepared and closed with stitches. It is possible that the condition of the bowels will be so bad that in the case of the small intestine a portion must be resected. When the opening is too low down in the rectum for closure, a drainage-tube must always be placed at the point of opening, and the bowels kept perfectly quiet with opium for three or four days, so that no fecal matter may escape before the opening is sufficiently closed by lymph. It is possible in a goodly number of these extreme cases to get a good result, and when the patients do pass through the operation safely, it is surprising to see how quickly they regain their health up to a certain safe point. At times they are so badly wrecked that perfect recovery is a matter of years. The adhesions are so extensive and dense, the

patient in such a low physical condition, and the damage to viscera so irreparable in many cases, that they are unable to stand the necessarily prolonged operation, or they succumb to septic peritonitis. This, however, should be no reason for staying the surgeon's hand so long as he can give a reasonable chance of cure to a respectable proportion of such cases. These cases invariably die if left alone, and each one cured is a life snatched from the grave" (Text-Book of Gynecology, page 517).

The following case is illustrative of the foregoing remarks which have been largely taken from our standard text-books:

Mrs. P., aged thirty-two years, was first seen in consultation with Drs. Somerville and Miller, July 13, 1897. She gave a history somewhat as follows: Family history excellent; menstrual function normal; one pregnancy and confinement some years since. Her health was good until five years ago, when she had a severe attack of inflammation of the bowels, which confined her to her bed for three months; at one time her life was despaired of. Convalescence was slow, but apparently complete, and she had no more trouble until five weeks before I saw her. At this time she was out in a severe rain and thoroughly drenched; the next day she came down with a pelvic inflammation, which gradually became worse for about three weeks, until the abscess broke into the rectum. This relieved the local symptoms to such an extent that she was up and about, considering herself to be in a fair way to convalescence; in a few days, however, the abscess began to fill again, with a return of the old symptoms. A second time the abscess broke, discharged through the bowels a quantity of offensive pus, with consequent relief of the symptoms; but in a few days it again filled, this time with active symptoms of septic absorption, which showed themselves in the form of a severe chill, fever, restlessness, and a dry, brown tongue. The day following there was another chill.

A vaginal examination showed that the tubes and ovaries on both sides were adherent, and that those on

the left side were imbedded in a mass of considerable size, which extended downward and behind the uterus, thoroughly fixing all the pelvic organs. The diagnosis of the attending physicians was confirmed; it was that of a pelvic abscess which had ruptured into the rectum, complicated by septic absorption; an operation was advised. To this she consented and entered the Cleveland General Hospital.

Operation. July 14, 1897, when the abdomen was opened, a dense mass of old inflammatory products was found in the pelvis, between the uterus and rectum, firmly adherent to both, and to the bottom of Douglas's cul-de-sac as well as to the left ovary. This mass, including the ovaries, was removed with difficulty, and was torn open in the endeavor, allowing the contents of the abscess to contaminate the pelvic and lower abdominal cavities. These were thoroughly flushed, the rectum was lifted, the opening sought for and closed up with fine silk. After again thoroughly flushing the abdomen and pelvis a large drainage-tube was passed through the vagina; the site of the rectal fistula was protected by iodoform gauze, the end of which was brought out through the vaginal opening. The abdomen was closed at once.

Notwithstanding the difficulty of the operation, due to the density of the adhesions and the complications of septic absorption and septic infection of the pelvis, as well as rectal fistula, convalescence was entirely uneventful with the exception of an infection of the lower part of the abdominal wound; so that the lower three stitches had to be removed early and the wound drained. This infection was in the subcutaneous connective tissue and did not extend to the peritoneum, so it was of small moment. The gauze was removed on the fourth day, and the rubber drainage-tube was gradually shortened. There has been no trouble of any kind since the operation.

Abstract.**SUTURE MATERIALS AND METHODS IN
CELIOTOMY.**

TRANSLATION AND ABSTRACT BY

HUNTER ROBB, M. D.,

Professor of Gynecology, Western Reserve University, Cleveland.

In an article bearing this title which appeared in the *Monatsschrift für Geburtshülfe und Gynäkologie* for September, 1896, Dr. Hugo Stettiner, of Berlin, reviews the subject of the closing of celiotomy wounds, and discusses the *status quo* of the different materials for sutures which have been employed. The following is a short abstract of his paper:

In celiotomies it must be conceded that one of the most important points is the closing of the wound, but as to the best method of doing this there is still great divergence of opinions.

In 1887, J. Veit came to the conclusion that the healing of wounds does not depend on the material used for sutures, but on its antiseptic condition, and that catgut best fulfilled the necessary requirements. To-day the situation is reversed. Steam sterilization for silk and other materials is so easy, and the results are so reliable, that many have tired of the various elaborate methods necessary for the sterilization of catgut and have given up this material in spite of the advantages connected with its absorbability. Since asepsis has taken the place of antiseptics the introduction into a wound of an incompletely sterilized suture has a different significance from that which it had when the antiseptic fluids were used during operations.

The opposition to catgut arose partly from the complexity of the methods necessary to render it sterile, but even more from the uncertainty of the results. While many operators, therefore, abandoned, at least temporarily, the use of catgut, efforts were made on all sides to render its use free from danger, and many new methods

for sterilizing this material have from time to time been offered.

The experiments of Repin and Terrier in Pasteur's laboratory are noteworthy. Ether was first employed to drive out the fat, the water being afterwards driven off by drying in the hot-air apparatus, or by means of sulphuric acid. Sterilization was effected by means of the steam of absolute alcohol at 120° in the autoclave.

Saul used ethyl alcohol of the following concentration:

Alcohol absolut.	850.0
Acid. carb. liquef.	50.0
Aq. dest.	100.0

He allowed this to come slowly to the boiling point and to boil for 15 minutes, the whole process lasting 45 minutes. Though boiling only for from 5 to 7 minutes is sufficient to kill the spores of the anthrax bacillus, a longer time was allowed to insure absolute sterilization. Hofmeister has reported that the method failed in the clinic at Tübingen, though the utmost care was used. Secondary suppuration sometimes took place deep down in the tissues, and often the ligature threads were expelled. Bacteriological experiments also gave culture development. Hofmeister announced a method of his own which he had found to be reliable.

Kossman and Vollmer put catgut in a 2% solution of formalin for 24 hours, and then kept it in a $\frac{1}{2}$ % solution. But this latter procedure was not found to be successful, since catgut becomes brittle if soaked for a long time in formalin. Vollmer, therefore, kept it in Tavel's solution, and also washed away with water the formalin, which had proved injurious to the hands.

Hlawacek announces a process similar to, but discovered independently, of Hofmeister's procedure, which was published later. It rests on the property possessed by formalin of hardening gluey substances so that they lose their solubility in boiling water. The raw catgut was put in a 4 or 5% solution of formalin for 12 to 24 hours; boiled in water for from 10 to 15 minutes and hardened in alco-

hol to which 6% of glycerine had been added, with sublimate or some other antiseptic.

In the present position, then, of the question, the views of those who have, for a time at least, discarded the use of catgut as an unreliable suture material must be held to be justifiable. It is an undoubted fact that in many cases of minor infections in the Friedrichshain the fault lay with the catgut, a fact which was amply proved by the absence of the same after Hahn discarded this suture material. It is possible that these difficulties may ultimately be overcome by certain modifications in the use of formalin, but it is hard to deal with a material like catgut which varies so much, for it often happens that some threads are easily sterilized while others are much more resistant. Good luck has had a good deal to do with the success of the present procedures in the hands of certain operators.

Turning now to the other suture materials, silk, silk-worm gut and silver wire, we do not even here find complete satisfaction. Although it is true that they are easily sterilized, the fact remains that certain authors record even more numerous minor infections with these than with catgut.

Winter declares that silk, though the sterilization of it by steam seems to be complete, may serve as the avenue of approach for the organisms. Kocher is inclined to give the preference to a suture material that has been prepared antiseptically. In 35 goitre operations in which silk treated with arsenious acid was used he obtained complete healing by first intention.

A second danger belonging to the use of materials which are not absorbed lies in the fact that after primary healing fistulæ may arise which do not heal until the foreign substance is expelled. This condition can also be traced to a subsequent entrance of micro-organisms. Winter has suggested that it might be prevented by a longer use of the occlusive dressing.

On these lines C. Dun experimented on 98 rabbits by putting under the skin bacterial cultures, or silk knots,

sterilized, or impregnated with sublimate, or again with bacteria cultures. His results brought him to the following conclusions:

1. The larger the foreign substance, the greater the reaction on the surrounding tissue.

2. Ligatures soaked in sublimate cause more marked reaction than those which are sterile.

3. The same quantity of bacteria which, when alone, can be received by the body without causing any reaction, produces a strong reaction when the silk knot is present.

4. This reaction is less with knots soaked in sublimate than with sterile ones.

The third finding may explain many infections and the late expulsion of ligatures. The fourth probably shows the need of employing fine materials. For this reason linen threads have been preferred by some authors. Peterson in defense of silkworm gut holds that, being strong, fine threads may be used; it does not swell and thus irritate by thickening and shortening; it is easily sterilized by simple mechanical means; it does not, like catgut and silk, allow bacteria to enter the wounds; it is very durable, and is not spoiled by long keeping; it is easily tied; it does not irritate at all, and can remain in the tissues a year without causing reaction.

The object of the employment of sutures is, by bringing about the proper union of the various layers cut through, to restore the *status quo ante operationem*. Some have remained true to the prevailing knot suture. Walcher maintains that with it success can be easily obtained if one only takes care that the thread be made to describe approximately a circle whose diameter shall equal the height of the wound surface. Others prefer a separate suture for the peritoneum in order to avoid hemorrhage into the abdominal cavity in case the suture track should bleed. Hahn concludes that where there is no special need of a speedy ending of the operation, or when the consistence of the abdominal walls does not render desirable several layers of sutures, the following method

should be pursued: A strong silk knot suture is first placed in each of the upper and lower angles of the wound; the abdominal integuments are pulled up by both threads, and by this means the edges of the incised peritoneum are brought well together; the peritoneum is then united with fine silk sutures; after this the other various layers are united by a number of similar sutures.

Zweifel gave up this method on account of the formation of cavities and the damming up of the secretions that easily collect between the muscles and the serosa. He adopted the following procedure:

First the deep tension sutures going through the abdominal wall and including the peritoneum are put in. Then follows the union of the peritoneum by catgut with the interrupted or continuous suture. In the same way the fascia superficialis is united, without piercing the muscles. Now all the deep tension sutures are fastened by provisional surgical knots. In the spaces between the original sutures the superficial skin sutures are put in with fine straight needles and tied. Then comes the final tying of the tension sutures. There are modifications of this method; Winter and others include the fascia and muscles in the same sutures.

All these methods aim at obtaining a firm abdominal suture that will prevent subsequent hernia. Kehrer insists that with a somewhat strong, broad linea alba one should resect this to the radiating borders of the recti muscles. Schede and Prochownick, so far as avoiding hernia, had good results from the use of buried wire-sutures. It is evident that an abdominal wound that has not healed by first intention, and a weak scar, even though good bandages be worn, predispose to hernia, but it must be conceded that other factors may be of even more importance in this connection than the methods of suturing. Thus Fritsch has emphasized the danger of too great an extension of the section, especially towards the symphysis pubis.

A. Martin turned his attention to the general condition of the abdominal integuments. Meinert thinks that

in some patients the trouble originates from a trophic disturbance in the connective tissue, since the herniæ are often accompanied by a general enteroptosis. The experiments of Waitz in dealing with the influence of intestinal adhesions following celiotomy upon the formation of hernia are of great interest. The question of abdominal hernia and the proper prophylaxis certainly deserves further study.

It is to be hoped that the investigations which Martin's work has stimulated, upon the closing of celiotomy wounds and upon the condition of the abdominal coverings, may ultimately lead to satisfactory results and clear up the question whether or no the lateral is to be preferred to the median incision in opening the abdominal cavity.

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SAMUEL W. KELLEY, M. D., Editor.
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No. 4.

Editorial.

MEDICAL SERVICES TO PAUPERS.

In corroboration of the statements made in our editorial last month on "Medical Incomes," we are in receipt of a circular letter from the Physicians' and Surgeons' Protective League, of Mansfield, Ohio. It seems that the doctors in that part of the country have at last awakened to the fact that physicians are about the poorest business men in the community and have allowed themselves to be belittled and imposed upon in the matter of compensation for services to the township poor, as they have in so many other particulars. Following is the letter:

MANSFIELD, O., January 31st, 1898.

DEAR DOCTOR:—"The butcher, the baker, and candle-stick maker," after presenting their bills to Township Trustees, are allowed the amounts of said bills IN FULL for goods furnished to pauper subjects. Not so, how-

ever, are bills rendered by physicians and surgeons. The law as it now stands on the statute books gives the trustees sole power to allow us just whatever they choose, or "a reasonable compensation." This compensation is thus given us at the hands of a set of men who know nothing of the value of such services, and we are paid, or not, just as their ideas may dictate, and we must accept just whatever they say, or get nothing. The great injustice of this law upon our noble profession has been keenly felt, and, to have this law amended whereby we can obtain our rights, a special meeting of the PHYSICIANS' AND SURGEONS' PROTECTIVE LEAGUE, OF MANSFIELD, OHIO, was held in the Opera House, at Mansfield, January 17th, 1898. A committee was appointed to have steps taken to amend Sec. 1494, so that compensation paid physicians for services rendered to paupers shall be at rates charged for such services in other than pauper cases in the community where said services shall have been rendered. We have had legal talent prepare the papers for us, and they will be presented to this Legislature for action. We hope to have the combined support of every doctor in Ohio and request you to immediately carry your request to your Representative and Senator to give this measure their undivided support. Doctor, make this a SPECIAL and PERSONAL matter, call and see your fellow doctors, "put your own shoulder to the wheel," and we shall obtain our rights. Everybody write your request to your own law makers to pass this measure and thereby elevate our profession to the dignified position to which it belongs.

Respectfully and fraternally,

R. S. BOLES,
C. JENNER HARRIS,
J. L. STEVENS,
WM. LOUGHRIDGE,
J. S. STEWART,

Committee.

The action which it is proposed shall be taken in this matter is embodied in the following proposed bill, which accompanies the letter:

SECTION 1. Be it enacted by the General Assembly of the State of Ohio, that Section 1494 of the Revised Statutes of Ohio be amended so as to read as follows:

SECTION 1494. When a person in the township is in a condition requiring public relief, or the services of a physician or surgeon, complaint thereof shall be forthwith made to the Township Trustees, by some person having knowledge of the fact; if medical service is required, the physician or surgeon called or attending shall immediately notify the Trustees, or one of them, in writing, that he is attending a pauper, and thereupon the Township shall be liable for all relief and for services rendered, which may thereafter be afforded to such person, only in such amount as the Trustees determine to be just and reasonable; *provided, however, that said Trustees shall not reduce said compensation to a sum below what is customary for like services in other than pauper cases in the community in which said services were rendered; provided also, that said physician or surgeon shall not visit the person so needing such*

relief as aforesaid, to exceed once each day, unless directed to do so by the Trustees or any one of them ; but if such notice be not given within three days after such relief is afforded, or service begins, then said Township shall be liable for such relief or services only, as may be rendered after notice has been given, but the Trustees, or one of them, may at any time order the discontinuance of such services or relief, and they shall not be liable for any services or relief thereafter rendered.

SECTION 2. That said Section 1494 is hereby repealed, and this act shall take effect and be in force from and after its passage.

This is the statute as it now stands, with the amendment inserted in *italics*. Every society in Ohio is asked to indorse this and to notify their Senators and Representatives and every doctor in Ohio is requested to do the same. Any contributions to aid in this matter will be duly receipted for by the committee.

We are glad the profession is directing its attention to this abuse of its rights. It is all very well to talk about "the dignity" and "the philanthropy" of "our noble profession;" but that dignity is not apparent when petty officials "drest in a little brief authority" can have us as completely at their mercy as they have the paupers themselves. Neither are we encouraged nor enabled to practice philanthropy, however much disposed to do so, when we are so ill paid by those who are able to pay fairly. The burden of the poor should rest evenly upon all the tax-payers. If the doctor owns property he pays tax equally with his neighbor, thus doing his share toward the support of the poor. To take his services for less than their value, for the benefit of the community, is the same as another tax.

A law which discriminates against any one class is obviously unfair. If the law were so constructed as to allow the trustees to dictate their prices to the butchers, for instance, there would long since have been a vigorous and effectual objection. But the doctors, with a good nature amounting to stupidity, have quietly endured this state of things until with one abuse after another lessening the medical income, we have arrived at the point where we must correct the abuses or starve out. This instance is only one of many, but we are glad to see that it is to be corrected. It can be done, and that easily.

We have long labored to arouse the profession to a sense of its own political power. We are numerous enough and strong enough to bring about whatever legislation or whatever public opinion should be brought into existence if we, as a profession, acting together, only will to do so, and go about it in the right way.

Let us act together in this little matter and have this amendment passed in the manner these gentlemen propose.

DR. JOSEPH O'DWYER.

In the death of Dr. Joseph O'Dwyer, the profession has lost a brilliant and admirable member. One scarcely knows which to admire most, the knowledge and ingenuity displayed in the invention which won him fame, the patience and perseverance required to perfect and establish it, or the modesty with which he wore his laurels. His professional acquirements were by no means limited to intubation, for we find that he had been a teacher of physical diagnosis, and an experienced and skillful obstetrician, besides a general practitioner of great judgment. Nor was modesty his only good trait of character as a man, although the rarity of this trait makes it the more remarkable. While we join with the whole medical world in honoring his memory, we may claim a special right in the fact that Cleveland was his native city. Here he was born on the 12th day of October, 1841. We cannot furnish our readers with a better account of his career than that written by Dr. W. P. Northrup, who knew him well, for the Archives of Pediatrics:

"His boyhood was spent in Canada, near London. In that city he went to school, and in mature years began his preliminary medical studies with Dr. Anderson, his preceptor. He came to New York in 1864, graduating at the College of Physicians and Surgeons in 1866. At this time the interne staff of Charity Hospital was made

distinct from that of Bellevue Hospital, and Dr. O'Dwyer was on the first staff appointed.

"During his service the city was visited with cholera, and Dr. O'Dwyer was selected to take charge of the fever hospital located upon Blackwell's Island. The commissioner trusted him to take entire charge and act in accord with his own judgment in his isolated quarantine. Subsequently typhus fever broke out and from a patient in the penitentiary Dr. O'Dwyer contracted the disease himself. His recovery was complete, without any sequelæ. His memory was always vividly clear concerning the onset of the typhus, its excruciating head and back pains and initial symptoms. The fatality among the patients was great; he fully expected to die, made all preparations for disposal of his effects, and went to bed.

"In 1868-69, he became examiner and distributor of all patients applying for admission to the hospitals of the department of Charities and Corrections. In this position he was allowed to hold physical diagnosis classes and always afterward referred with pleasure to his work. At this time also he opened an office on Second avenue and Fifty-fifth street. In the spring of 1872, Dr. O'Dwyer moved to Lexington avenue, near Sixty-fifth street, where many of our readers first knew him. In 1873, the New York Foundling Asylum opened its new building in his neighborhood and his connection with it began at that time — twenty-five years ago.

"In 1880, Dr. O'Dwyer began, as it has been expressed, 'thinking on intubation.' It was not, however, for five years more that the general public learned this fact. The readers of the *Archives* are familiar with the facts of the *Evolution of Intubation*, as given by the inventor himself. His own estimate was that intubation for chronic stenosis would in time be considered quite as valuable, if not more valuable, than intubation for acute stenosis. All problems connected with respiration and laryngeal stenosis were especially interesting to Dr. O'Dwyer. During his last months he placed an inflating apparatus in the Presbyterian Hospital, which

was designed to aid pneumonia patients in respiration, practically administering oxygen in atmospheric air.

“Dr. O'Dwyer was an excellent teacher, though teaching wore upon his strength very much. For a few years he taught intubation in the Post-Graduate Medical School and Hospital, and after, gave a short course in the Bellevue Hospital Medical College. He was one of the consulting staff to Willard Parker Hospital, before the appointment of the present visiting staff, and the president of the American Pediatric Society in 1896.

“At the time of his death he was attending physician to St. Vincent's Hospital and the Foundling Hospital. In the latter institution he was teacher of the younger men, the expert obstetrician and intubationist, and the indispensable medical and business adviser of the Sisters of Charity. Few men know that Dr. O'Dwyer had an experience of over 3,000 confinements (including miscarriages) in private life.

“Dr. O'Dwyer was a devout Roman Catholic. He was a fond father, having four sons, and for the last ten years of life a constant mourner of his dead wife. He was a retiring, diffident man. The only times I have ever seen him irritated and impatient were when someone urged him to lecture or read an address or paper. His answer was ‘Now you know that if I promise, it will spoil my sleep.’

“When he began to think on intubation he began to lie awake nights. Soon after intubation was given to the public, his wife died; then followed the long fight over intubation—its anxieties in practice, the interruptions to night's rest, and more than all else, the discussion and opposition of writers who obviously had misapprehended the prominent points and whose judicial capacity was in inverse proportion to the outcry they were making. “Sleep, sleep, if I could only sleep,” was his one wail.

“Gradually his endurance became less; his steps dragged. Poor sleep, ten years without an out-of-town vacation, told upon him, and early in November it was

certain that Dr. O'Dwyer was breaking down. In the first week in December, thrombosis of certain cerebellar arteries took place, and five weeks later death ensued from secondary meningitis.

"I can no more fittingly express my appreciation of Dr. O'Dwyer than by relating the following incident: A stranger among a small group sidled up to me and whispered. At that moment a chance pause in all conversation exposed him. 'Yes,' I replied loudly, 'that is O'Dwyer, the intubation man, but,' I added, 'intubation is the least of his virtues.'"

UNMITIGATED AFFRONTERY.

The affrontery of the patent medicine man is something too colossal for our powers of description. As that apartment of his being which should be occupied by a sense of right and wrong is probably used as a laboratory and storehouse for tricks and devices; while instead of a conscience he has an extra supply of greed, it must be that he has a special and spacious chamber for his "gall." If the reader has any doubts on this point let us relate to him a little incident. Every physician knows the nostrums of the J. C. Ayer Co., and how they have been advertised all over the country for many years. They are patented nostrums of the most offensive description. One of their preparations is among the number recently prosecuted by Commissioner Blackburn, under the Pure Food laws of Ohio. It will be remembered that this patent medicine firm at once telegraphed to stop its advertising in a certain newspaper, the obvious object being to show the newspapers where their bread and butter came from. (See the editorial in the January number of the GAZETTE). Now there comes to us an offer of advertising patronage from that same patent medicine firm. This, of course, we promptly and politely declined, as we have many another, whereupon the agent of the company expressed great surprise, saying that of a great many contracts offered to medical journals, very few had

been refused. Now we are watching with considerable interest to see what medical journals will insert this advertisement, and we are waiting with equal concern to hear the verdict of the profession in this case. Legitimate and ethical medical journalism has never been any too liberally supported by the profession, or it would not be necessary for any high class journal to depend upon advertising patronage for its maintenance. But if the time ever comes that all medical journals are obliged to advertise this class of goods or discontinue publication, we shall choose to discontinue. The average medical reader is none too careful to choose the ethical journal, and to refuse to patronize the trade journal or the journal which admits improper advertisements. We wish every doctor would pay attention to this matter and take a positive stand. This is one of the points on which the profession is entirely too indifferent.

THE OHIO HOSPITAL FOR EPILEPTICS.

The Bulletin of the Ohio Hospital for Epileptics, January, 1898, lies neat and consequential on my table; its edges are cut and its last paragraph read. The people of Ohio are to be congratulated upon the success already attained by this noble charity. Ohio, that has so long been celebrated for its national characters, is to become prominent because of her philanthropy. Not the ill-judged giving of thoughtless legislators, but charity made potent by the magic leaven of medical science.

As one long interested in the study of the epileptic, his care, treatment, and future, the writer has contemplated with pleasure and admiration the noble work of colonization of the sufferers from the *sacred disease*, at Bielfeld, Westphalia, Germany. This most perfect model of an eleemosynary colony at present numbers about 3,000 inhabitants. When the writer visited this famous colony it seemed, with its schools and diversified industries, a village whose many inhabitants were pursuing all

occupations and enjoying all the pleasures and recreations of a prosperous and happy community.

No praise of mine can add to the glory of the simple-hearted Pastor von Bodelschwingh, who started this colony, about thirty years ago, with only four epileptics. It seemed to be the idea of this great-hearted German that, could he gather together these pariahs of society, whose disease had destroyed their ethical balance and left them grown-up bodies with the vicious minds of children—could he gather them in the country, away from the excitement of an artificial civilization, restore them to a primitive existence where, surrounded by flowers and gardens, breathing in pure air brightened by the sunshine, where even their enfeebled minds could rejoice in the beauties and bounty of a beneficent Creator, there they might become self-supporting, self-respecting, and less a burden on society of which they are at least an integral part. That he has succeeded is testified to by all who have paid a visit to this happy colony of unfortunates; and from his small beginning there has been evolved the so-called moral treatment of epilepsy, which by all neurologists is now regarded as the most promising treatment of the dreaded disorder.

When the bill of 1890 was passed providing for the erection of a State Hospital for Epileptics, the writer despaired and had little hope that any good would result. Legislatures are quite certain to give attention to false ideas of economy in these matters, and house hordes of unfortunates in great striking structures that will appeal to the public eye and enable the management to make an economical balance sheet. Thus the essential element of independent community is destroyed, and in its place the hated walls of an asylum loom grim and dark o'er the clouded mind of the epileptic. To the public it is a hospital, a poorhouse, instead of a colony of unfortunates who, beneath the sheltering arm of the state, are struggling under the guidance of medical science to earn an independent livelihood and, if possible, restoration of their mental, moral, and physical status.

When the *hospital* plans were published all hope died. Occasionally a bad beginning makes a good ending. In a paper read by Dr. Rutter, the medical manager, before the National Conference of Charities and Corrections at Toronto, 1897, the writer is glad to observe the wisdom of the hospital plan questioned and the encouraging declaration made that "Of the original thirty-six buildings, only thirteen have been built as designed. The location and design of six others, now nearly completed, have been materially changed. One hundred and twenty additional acres of land have been purchased, and a cottage for the insane constructed one-half mile from the original group. Other buildings, projected for the future, are to be much farther away, their precise location depending on the possibilities in the selection and purchase of land, which may or may not adjoin the tract now owned by the state."

This presages the abandonment of the hospital plan and the final adoption of colonization as the only reasonable, practical, and efficient way to gain the great and lasting effects of the so-called moral treatment of epilepsy. Now let the stigma *Hospital* be wiped out by the substitution of *Colony* and make it a colony indeed; do away with the present formality of commitment, and let the poor wrecks look upon the state as a kind and indulgent parent, and the colony as their rightful and natural home.

The assembling of such a large number of unfortunates, afflicted with every phase of epileptic disease, suggests the exalted opportunity for observation and study of its phenomena and inquiry into the mystery of its cause. It speaks well for the liberal culture of a board of five lawyers (strange that all lawyers and no physicians should be appointed as trustees of a purely medical institution), that they should give heed to this unrivalled opportunity, and take measures to provide a first class laboratory wherein this great problem may be worked out. A laboratory is a small part of the means toward the solution. Our lawyer friends arose to the emergency and secured a truly great pathologist to conduct the in-

vestigations. The selection of Ohlmacher was peculiarly fit. His deserved reputation does him scant justice. He has all the attributes of the pathologist; accurate, patient, systematic, original; a man of action; a broad student; a clear thinker; an impressive writer; and far above all, an honest observer. In Ohlmacher, Cleveland lost a brilliant and original investigator, and while we counted his loss much, the state gained more, and if his future work fulfills the promise that the present Bulletin fore-shadows, then the science of medicine will have gained still more.

This cursory review of this inspiring subject would be incomplete without recognition of the credit due Dr. Rutter; and if he is successful in moulding legislation to the actual accomplishment of an ideal colonization out of such an impractical and unwieldy mass as he began with, then we must indeed do him the homage that alone belongs to the few great souls that unselfishly toil for the attainment of the high ideals that look to the scientific regeneration of mankind.

ALDRICH.

Periscope.

TREATMENT OF SWEATING FEET.

Dr. P. Richter (*Therap. Monatshefte*, 1897, 576) recommends to bathe the feet in a solution of formaldehyd (1 tablespoonful to 1 quart of water), or the use of tannoform or tartaric acid, which can be placed in small quantities between the toes and in the socks. In the boots or shoes the above formaldehyd solution or a 3 per cent carbolic acid solution is allowed to remain for an hour, which in case of relapse is to be repeated. Further, in sweating hands, Richter paints them with a 10 per cent solution of chromic acid. The yellow coloring of the palm of the hand soon disappears; the painting is repeated about ten times. Dr. A. Hoff, of Vienna, strongly recommends tannoform as follows: "It is especially valuable for marching troops, placing in the hands of military authorities a remedy which will soon render soldiers with sore feet fit for duty."

ACTION OF MUCILAGINOUS SUBSTANCES.

Tappeiner (*Deutsch. med. Wochenschr.*, 1897) has proven, through experiments on frogs and human beings, that mucilaginous substances will even in small quantities very greatly influence absorption. For example, hydrochloric acid, potassium chlorid, sodium chlorid, etc., when given in mucilages are noticeably influenced in their effects on the nerves. Certain solutions (peptones and sugar) are much more sparingly taken up by the stomach than without this vehicle. The elimination of urine occurs later when mucilaginous fluids are taken than when they are excluded.

ARISTOL IN GOITER.

Pollack (*Therap. Monatsh.*, 1897, 514) recommends the following liniment in goiter:

R—Aristol	0.5—3.0 g.	
Ætheris puri	5.0	“
Linimenti saponis	30.0	“ —M.

Sig.—Apply upon retiring.

DETECTION OF PHENOL IN URINE.

Since most of the tests for phenol in urine are interfered with by the other urinary constituents, J. Aman (*Journ. de pharm. et de chim.*, 1897, 361) distills the specimen with sulphuric acid and tests the distillate for phenol with either Millon's reagent or para-diazo-benzene-sulphonic acid, which produces an orange yellow to a deep red color. Millon's reagent has the advantage of greater permanence, but produces a less stable color, whereas the diazo-benzene-sulphonic acid solution must be made fresh before each application; it produces an excellent distinct reaction.

ESTIMATION OF URIC ACID.

Luff (*Pharm. journ.*, 1897, 213) supersaturates the urine with ammonium chlorid, allows to stand 2 hours after repeated shaking, and filters. The ammonium urate precipitated is washed 3 or 4 times with saturated ammonium chlorid solution, removed from the filter with a stream of hot water, boiled with an excess of hydrochloric acid. After cooling for 2 hours it is filtered and the uric acid washed with cold water. (For the final results 1 mg. of uric acid is added for every 15 c.c. of filtrate.)

The uric acid is washed off the filter, dissolved in warm sodium hydroxid solution, 20 c.c. sulphuric acid added, and titrated warm with $\frac{1}{10}$ normal potassium permanganate solution; each c.c. of the latter represents 0.00375 grammes of uric acid.

ON PROTARGOL.

Prof. A. Neisser (*Dermatol. Centralb.*, 1897, Heft I.) finds the percentage of silver in different silver preparations as follows:

Protargol	8%
Silver nitrate	63.5%
Argonin	1.0%
Argentamin . . (with 10% silver nitrate)	6.35%.

Protargol is readily soluble in water, the solution not becoming cloudy on heating. Ammonium sulphid only makes the solution darker without causing a precipitation. It is of importance to note that protargol does not stain the hands or linen like other silver preparations. Neisser claims never to have had such constantly good and certain results in the treatment of gonorrhea as with protargol.

THE THERAPY OF WHOOPING COUGH.

Wertheimer (*Münchner med. Wochensch.*, 1897) recommends, first, good fresh air. As a medicine he recommends antipyrin as the relatively more active, but that in using it an irritation of the kidneys is to be guarded against. Morphin was of no effect, quinin easily disturbs digestion; and with bromoform, in spite of the most careful dosing, a condition of apathy, hypnotic effect, and a loss of appetite results. Often the following recipe gave relief:

Extract belladonna	0.005
Ammonium bromid	0.100 to 0.200

A DETACHABLE PLASTER BANDAGE.

Drs. Degen and Piro (*Pharm. Centralb.*, 38, 785) have patented such a bandage. The roller to which the calcined plaster is to be applied is first soaked in an imperious substance (paraffin, wax), and after this has become dry and hard it is covered with plaster of Paris and treated as an ordinary plaster bandage. Such a bandage can be readily removed without the use of any special apparatus, such as scissors, chisel, or knife.

ANESTHESIA OF THE BLADDER MUCOUS MEMBRANE.

Noguès (*Monatsh. f. pr. Dermat.*, 1897) says that in order to avoid the unpleasant symptoms produced by washing out the bladder with nitrate of silver solutions in diseases of the bladder, it is a practice in the clinic of Guyon (Paris) to employ antipyrin as an anesthetic. After douching with a boric acid solution, 100 c.c. of 5% antipyrin solution is injected and allowed to remain 15 to 20 minutes; then follows a 0.1 to 0.2% silver nitrate solution, and after this again 100 c.c. antipyrin solution, which is allowed to remain in the bladder until the next urination.

SPENZER.

Among Our Exchanges.

Every practitioner has observed the difference in the quality of sound transmitted through the stethoscope according as the end is lightly or firmly pressed against the chest wall. Not as many, perhaps, have been so accustomed to use the solid and the flexible binaural stethoscope in alternation as to note that, while with the rigid stethoscope (and those binaural stethoscopes that have their tubes stiffened with a coil of wire are classed as rigid) increase of pressure over the apex of the heart intensifies and raises the pitch, with the flexible stethoscope the reverse is true—the intensity of the sound is diminished and its quality altered. A little consideration will serve to render it clear why that must be so. The sound that comes to the ear has two elements, viz., the sound of the heart itself and the reinforcement of that sound by the resonance of the chest wall. The rigid stethoscope, even if it be hollow, transmits the sound chiefly through its body, and so, the more firmly it is pressed against the vibrating chest wall, the more clearly does it transmit the resonance or over-tones. With the flexible stethoscope, however, all the sound is transmitted via the column of air set in vibration by the small diaphragm of skin covering the bell of the instrument. When pressure is just sufficient to make exact contact with the skin and shut out extraneous sounds, the heart sound is heard reinforced by the over-tones due to chest resonance, for the skin vibrates in unison with the chest wall as well as under the direct impact of the heart. But pressure damps the over-tones. The section of skin be-

neath the bell becomes isolated, as it were, and no longer vibrates freely with the chest wall. It transmits only the vibrations due to the direct impulse of the organ in contact with the chest wall beneath. It remained for DR. HENRY SEWALL,¹ of Denver, Colo., to investigate and formulate the relation of this fact to the diagnosis of obscure lesions of the heart and its vessels. For some four years he has been studying and recording his observations. He noticed that a very feeble ventricular contraction may give rise to a strong resonance note whenever the fundamental tone of the chest wall is a harmony of the first heart sound, thus deceiving the ear with a deceptive impression of force far in excess of the actual fact. But when the flexible stethoscope is applied with pressure, the factitious sound of resonance being largely eliminated, the observer can estimate more accurately the real energy of the beat. The size of the organ can also be very exactly outlined by stethoscopy with pressure, for the first sound becomes but faintly audible so soon as the border of the ventricle is passed—a point of especial value in determining whether an area of dullness at the right of the sternum be a dilated right ventricle or no. Under normal conditions the second sound as heard in the second costal interspace close to the sternum is nearly or quite annulled by pressure, but when the aorta is dilated so as to come into contact with the chest wall the second sound persists strong in its proper area in spite of the pressure. *Aneurysm* or *aortic dilatation* may be diagnosed by virtue of this sign when other evidences are obscure. With the exception of anemic folk with flexible chest walls and thorax narrow from before backward (for in such SIR W. JENNER² showed as long ago as 1856 this pressure at the base of the heart caused murmurs due to constriction of the pulmonary artery), these strong "hemic" murmurs heard at the base in systole, and shown by autopsy to have no organic cause, disappear, and likewise the murmur of *aortic stenosis* heard at the apex. Not so, however, the murmur of *mitral insufficiency*, which comes out strongly and characteristically under pressure at the apex, becoming thereby distinguishable from that of aortic stenosis. The pre-systolic murmur of *mitral stenosis* is well preserved at the apex, as is also the murmur of *tricuspid regurgitation* within the area of its greatest intensity over the right ventricle. Unless there

¹ *N. Y. Med. Jour.*, Dec. 4, '97.

² *Med. Times and Gazette*, 1856, Vol. XII., p. 207.

be aneurysm or considerable dilatation of the ascending aorta, the *aortic regurgitant* murmur is annulled under the second right cartilage, but is fairly well preserved at the apex. But when there is simultaneously mitral stenosis with aortic insufficiency the murmur of the former is more perfectly retained than the latter. It goes without saying that those discriminations which depend on the propagation of murmurs along the line of the vessels, or toward the axilla, do not obtain when firm pressure is used with the flexible stethoscope. The murmurs, like the normal heart-sounds, are limited to the area where the viscus comes into direct contact with the chest wall, and it should be borne in mind also that the sounds are clearer during expiration than inspiration, and that a deep breath strongly inflating the lung, or an emphysematous lung permanently inflated cannot but obscure the normal transmission of the sounds, the layer of inflated lung being but a poor conductor of vibrations. A sign has been observed by DR. L. BRAUN³ as obtaining in *tricuspid insufficiency* where there is a very considerable dilatation of the right ventricle. There is a pulsation in the second left intercostal space near the sternum, beginning before and attaining its maximum at the moment of systole. It is not present by any means in all cases, but when present it is of value as a sign not only of the insufficiency, but of a somewhat early confirmation of the diagnosis *post mortem*. DR. F. C. SHATTUC insists that we must not be too particular in demanding that our cases of *pericarditis*⁴ manifest a pear-shaped or pyramidal area of dullness. Far more commonly, in his experience, they prefer to extend the normal area of dullness about equally in every direction. If, therefore, you find such an enlarged area with the apex beat within the area, even though the beat be visible and palpable, you are safe in diagnosing pericarditis with effusion, especially if with this sign you have also paradoxical pulse or sudden collapse. Dr. Shattuc is an advocate of early tapping, preferring as a site for the puncture the left costo-xyphoid angle, and recommending that the needle be thrust upward and backward.

DR. C. L. SCHLEICH, of Berlin, not content with the reputation that has come to him through his infiltration method of local anesthesia, has for some time been devoting his energies to the question of *general anesthesia* in

³ *La médecine moderne.*

⁴ *Boston Med. and Surg. Jour.*, July 8, '97.

order to find some means of avoiding or lessening, at least, the dangers that inhere in the use of either chloroform or ether. He reasoned that other things being equal, the danger of the anesthetic rose as the boiling point rose, while the amount of anesthetic necessary was greater the lower the boiling point. Chloroform, with a boiling point of 65° C. (149° F.) being but slowly eliminated by the breath when the anesthetic is withdrawn, becomes more and more dangerous with prolonged anesthesia, while ether, with its boiling point of 34° C. (93° F.) is more rapidly eliminated, and requires a vastly greater volume to produce and maintain the anesthesia. He conceived that the ideal anesthetic for safety and efficiency ought to have a boiling point somewhere near the natural temperature of the body—just enough above to secure a prompt anesthesia, not enough above to render elimination too prolonged. Considering merely the boiling point, ethyl bromid boiling at 39° C. (102° F.) satisfied the conditions, but unfortunately experience had proven that the untoward effects of the bromin more than counterbalanced the advantage arising from its prompt elimination, so he set about making original investigation and experiments upon animals with a view of devising a mixture which should fulfill the conditions. He finally settled upon a compound of chloroform, ether, and benzin (petroleum ether), the latter of a boiling point of 60° to 65° C. (140° to 148° F.). Formula I. is for short operations; boiling point 38° C. (100.4° F.) and consists of chloroform, 45 parts; benzin, 15 parts; sulphuric ether, 180 parts. Formula II., for operations of medium length, consists of chloroform, 45 parts; benzin, 15 parts; ether, 150 parts. The boiling point is 40° C. (104° F.). Formula III., for major operations, with a boiling point of 42° C. (107.6° F.), is made up of chloroform, 30 parts; benzin, 15 parts; ether, 80 parts. These proportions are by volume, not weight. Though Schleich recommends a special inhaler, the mixtures may be used with an ordinary ether cone or chloroform mask. DR. WILLY MEYER, of New York City, who has been using these mixtures in his operations since last September, is enthusiastic over them. He maintains⁵ that there is none of that frequently recurring cyanosis, salivation, or accumulation of mucus in the trachea so annoying in ether anesthesia, nor yet the subsequent bronchitis or broncho-pneumonia; and as compared with chloroform its influence upon the

⁵ *Med. Rec.*, Dec. 4, '97.

heart's action is far less depressant. DR. M. L. MODURO,⁶ of New York City, gives a like report as to its efficiency. He says, speaking of his observation of its use in Schleich's clinic: "I was surprised at the rapidity with which patients both succumbed to and recovered from the anesthetic. A response to a question could be elicited immediately after the mask was removed from the face. Laxity of the abdominal walls was complete after an average of five minutes' narcosis. The stage of excitement was generally absent even in alcoholics. Cyanosis or nausea was never present, vomiting occurred about as frequently, never more so, as with the use of chloroform. There was no salivation or bronchitis. . . . The pulse was always of good tension, never increased, and sometimes decreased. . . . Patients awoken more refreshed than after the administration of ether or chloroform." Of course, in all this, we must allow for the inevitable enthusiasm for a new thing which looks as though it were a good thing; but we hope it will prove all so—and more so.

TUCKERMAN.

New Books.

TUBERCULOSIS OF THE GENITO-URINARY ORGANS, MALE AND FEMALE. By Nicholas Senn, M. D., LL. D. Philadelphia, 1897; W. B. Saunders. Galbraith, Agent, New England Bldg., Cleveland. 317 pages, illustrated.

This volume, by Dr. Senn, follows as the natural sequence of his larger volume upon tuberculosis of the bones, published some time ago. The present volume is a very timely and valuable addition to medical literature, and is of great value to both the surgeon and the general practitioner. Not only is it of great value in calling attention to the frequency and seriousness of tuberculosis of the genito-urinary organs, but especially in directing the practitioner to a correct diagnosis and treatment of these affections. Dr. Senn throughout the volume devotes special attention to the subject of diagnosis, and his remarks upon the treatment of these conditions will serve at least as an inspiration to the general practitioner and surgeon, and while we may not all secure the same brilliant results as reported in many of the cases in this volume, we may yet have our ambition fired to secure similar results.

⁶ *Med. News*, Nov. 27, '97.

The volume is divided into eleven parts, in each of which are considered, in order, the pathological conditions and changes produced by the tubercular bacilli in that particular part of the genito-urinary tract, the symptoms resulting, and the treatment in each condition. The most interesting parts are those upon tuberculosis of the testicle and epididymus; that upon tuberculosis of the cord, seminal vesicles, and prostate. The most comprehensive chapter, occupying Part XI. of the work, and including fully one-third of the volume, is devoted to a most satisfactory and exhaustive consideration of tuberculosis of the kidney.

The importance of diagnosis of the genito-urinary tract is of the first importance. In speaking in this connection, he says: "I have reason to believe that in many of the cases of destructive lesions of the penis treated by amputation of the organ, and in which no recurrence followed the operation, the disease was not carcinoma, as surmised, but tuberculosis."

It had come to be almost accepted as an absolute fact that primary tuberculosis of the testicle has its initial seat in the epididymus, that it is in this position that tubercular processes first soften and break down. But every average surgeon has found in his own practice sufficient exceptions to this rule, and our author calls particular attention to the fact that tuberculosis often attacks the body of the testicle primarily, and then the lesion extends to the epididymus along the cord to the seminal vesicles, to the bladder, ureter, and even the kidney. Thus, while we may no longer say in differentiating affections of the testicle, that tuberculosis most usually attacks the epididymus, that malignant growths most often affect the body of the testicle, still the fact remains as proven by the autopsies of Reclus (as quoted by the author) "that tuberculosis of the testicle without a similar affection of the epididymus is an exception, as he has only found three such cases in literature."

In his chapters upon treatment, in considering tuberculosis in the various parts of the genito-urinary tract the reader will certainly find subject for congratulation in the results secured. The author advises the usual general hygienic, nutritive, remedial agencies. He frankly admits that in miliary tuberculosis involving the organs of both sides the treatment should be palliative, supporting, and expectant. That the very fact that the organs of both sides are simultaneously or in succes-

sion affected becomes almost positive proof of the existence of tubercular conditions at other points, or their extension from other foci, and these latter often beyond the reach of successful surgical treatment. The class of cases in which the best results are secured by surgical interference are those of local origin in which the disease is limited to the organs of one side and where there is little or no extension, either ascending or descending, along the genito-urinary tract. He favors in suitable cases the injection of iodoform emulsion, 10%; a free incision in other cases, and dissecting out the affected structures; he would carry these surgical removals even to the vesiculæ seminales, which operation he has successfully performed, as well as reporting similar successes by a number of other surgeons in this operation.

In operations for tuberculosis of the genito-urinary tract it is as necessary as when the disease is in bone or other organs that it should be thoroughly eradicated in order to secure the greatest degree of success, and as the channels along which the tubercular elements may travel in the genito-urinary tract are so open and accessible and so often facilitated by gravity and the flow of fluids, the danger of extension of the tuberculous lesion to distant parts of the tract will also be great, and the operations must be done promptly before such extensions have occurred. That the operations may be performed at an early date a positive diagnosis is essential.

The volume as a whole is most satisfactory in matter, type, and arrangement, and will prove a most useful work to all medical men.

PARKER.

ANDERS' PRACTICE OF MEDICINE. A Text-Book of the Practice of Medicine by James M. Anders, Ph. D., LL. D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospital, Philadelphia, etc. Illustrated. Philadelphia: W. B. Saunders. Galbraith, Agent, New England Building. Cloth, \$5.50 net; sheep or half morocco, \$6.50 net.

This is a well gotten up, well illustrated, well indexed, up-to-date octavo volume of nearly 1,300 pages, clearly and without prolixity setting forth the present status of the science. Though designed primarily as a text-book for the student, its brevity and lucidity in the matter of differential diagnosis commend it also as a reference work for the busy practitioner, who is apt, by the

way, to refer to his text-books for light on a doubtful diagnosis, while in the matter of treatment he will probably fall back on his own experience, or his journal-reading. If a suggestion of improvement be allowable it is by way of rounding out the chapters on those medico-surgical diseases, such as appendicitis, gall-stone, etc., where emergencies arise and where the province of the surgeon seems somewhat to overlap that of the physician. So many of the profession are where they cannot indulge in the luxury of auto-specialization; so many must perforce assume the double responsibility of physician and surgeon, that no book intended for the use of the general practitioner is complete, unless with the same clearness with which the author deals with questions of diagnosis and medical treatment, he shall also have set forth those indications which warn the attendant that it has become his duty either to operate or send for one who will.

TUCKERMAN.

PAMPHLETS RECEIVED.

BENJ. W. HOLLIDAY, M. D., of Cleveland: THE CIVIC ASPECT OF SOME OF THE COMMON NEUROSES; from *Medicine*.

HUNTER ROBB, M. D., of Cleveland: THE INTRAUTERINE APPLICATION OF CHLORID OF ZINC; an abstract; from *Cleveland Medical Gazette*. SECONDARY ABDOMINAL PREGNANCY AFTER TRAUMATIC RUPTURE OF UTERUS IN THE FOURTH MONTH. LAPAROTOMY, RECOVERY; an abstract; from *Cleveland Medical Gazette*. THE BACTERIA OCCURRING IN THE FEMALE GENITAL CANAL AND THEIR RELATION TO ENDOMETRITIS; an abstract; from *Cleveland Medical Gazette*. THE CONSERVATIVE TREATMENT OF THE MYOMATOUS UTERUS; from *American Journal of Obstetrics*.

THOMAS H. HAWKINS, M. D., of Denver, Col.: THE ADVANTAGES OF VAGINO-ABDOMINAL SECTION; from *Am. Jour. Obstet. and Dis. of Women and Children*. AN IMPROVED METHOD FOR THE REMOVAL OF INTRALIGAMENTOUS CYST; from *Denver Medical Times*.

CHARLES H. MAY, M. D., of New York: THE TREATMENT OF CONTUSIONS OF THE LIDS (BLACK EYE); from *Medical Record*.

AGNES SPARKS, M. D., of Brooklyn, N. Y.: ALCOHOLISM IN WOMEN; ITS CAUSE, CONSEQUENCE, AND CURE.

OTTO LERCH, M. D., of New Orleans, La.: A CONTRIBUTION TO THE TREATMENT OF TYPHOID FEVER. THE WARM BATH. A MODIFICATION OF BRAND'S METHOD; from *New Orleans Med. and Surg. Journal*.

JOHN HOMANS, M. D., of Boston, Mass.: RECURRENT GALL STONES; Illustrated. AUGIOMA OF SPLEEN; Illustrated. EXCISION OF CECUM.

CHARLES GILBERT DAVIS, M. D., of Chicago, Ill.: VAGINAL HYSTERECTOMY; A REVIEW OF SIXTY-SIX CONSECUTIVE CASES; from *Journal Am. Med. Ass'n*.

Society Proceedings.

CLEVELAND MEDICAL SOCIETY.

Regular Meeting, December 17, 1897.

The president, Dr. Rosenwasser, was in the chair.

DR. L. B. TUCKERMAN presented a man suffering from varicose veins. A novel adjustable dressing had been made use of by the patient and the doctor thought the device worthy of exhibition. The appliance was made of canvas in the form of a legging, open on one side, the edges slightly overlapping, and was fastened with the iron catches commonly used on overshoes, the catch being so made that it may be fastened in either of several holes to adjust the slack canvas and make a perfectly fitting cover for the leg, easily removed or reapplied by the patient.

DR. O. B. CAMPBELL presented a paper, "The Practical Physician," and took the ground that the general physician still has a wide field for usefulness, and must deal with many questions thoughtfully and carefully as matters of his individual opinion. The laboratories were doing good work, but had not reached a point where an unquestionable policy was laid down for the practical physician. He thought that the natural tendency was to heed and follow the latest fads in medicine, but advised more individuality and careful judgment, with conservatism. He was not in favor of basing practice on the present state of our knowledge of microbes in opposition to individual thought and accumulated experience.

DR. WIRT asked for the doctor's views regarding the subject of antitoxin, and recent developments in the study of diphtheria.

DR. C. W. SMITH said that the paper had touched upon a question of vital importance, that of general practice in medicine, and thought that the society might profitably devote more time to subjects which perplex the practical physician at the bedside, where an immediate course of treatment must be mapped out, how best to control the symptoms and to choose the remedies best fitted for the purpose.

DR. WENNER remarked that there are generally about 309 remedies for each disease, and every one must use his judgment. In regard to symptoms, we had too long been dependent upon the treatment of symptoms and were looking for something better.

DR. J. G. SPENZER thought the laboratories were doing a wonderful work, and that the results obtained should be verified and made practical use of as far as possible. Every man should be a manipulator for himself, no extensive apparatus being required, as a rule, for practical tests.

DR. ROSENWASSER thought there was always danger in making a snap diagnosis. All possible evidence should be brought to bear upon each case, and careful examinations should be made.

DR. CAMPBELL, in closing, stated that he agreed with Dr. Spenser that the laboratories were useful, and was waiting for further developments to meet the needs of general work in practice. But at present, many questions had not been cleared up to the satisfaction of all, and he was frank to say that he was still skeptical as to microbes being the wholesale causation of disease.

DR. HUNTER ROBB read a paper on "The Treatment of Retrodisplacements of the Uterus." He laid stress upon the importance of the examination, to determine carefully the true state of the uterus and its surroundings, which is sometimes aided by the use of an anesthetic. He favored a conservative treatment and thought much could be accomplished by bimanual examination, manipulation and replacement of the uterus with the hand, or, in certain rare cases, by the repositor. Radical operations with the knife should be avoided as far as possible. Once replaced, the uterus should be supported by a suitable pessary. Adhesions, if not too firm, can often be broken up by massage.

A hard rubber pessary is allowed to remain in the vagina for a period of three to six weeks, and the patient is instructed to use a hot douche of salt solution, about 5 grains to the quart, daily. When pessaries are removed they should be thoroughly cleaned and coated with vaselin before being replaced. When adhesions are firm, or the uterus or adnexa are diseased, more radical measures are necessary, and the operation best suited to the conditions should be resorted to.

Ordinary displacements of the uterus, even though slight adhesions obtain, were considered to belong to the work of the general practitioner and could be successfully treated, but when any doubt as to the correctness of the diagnosis is felt, assistance or a more careful examination to clear up the difficulties before manipulation of the parts is begun was advised.

DR. W. H. HUMISTON pointed out the reason why all displacements are not attended with suffering as being the absence of inflammatory action. He suggested the occasional use of cotton or lamb's-wool tampons. The cotton might be saturated with a ten per cent. solution of ichthyol-glycerin, which he has found very useful in such cases. Hot water douches to allay inflammation and pessaries to support the womb, while recovery of normal support is attained, are made use of. He has no need for Alexander's operation. The use of the sound for replacing the uterus was condemned as being dangerous.

DR. ROSENWASSER cautioned against hasty diagnosis and advised a thorough examination of the patient from head to foot. Nervous symptoms might be due to other causes than the conditions at first noted. Collect all the facts and base diagnosis on a study of them all.

Sixth Annual Meeting, January 14, 1898.

The reports from the several standing committees indicated a most healthful growth and prosperity during the past year. Forty-one new members were admitted and the society now numbers 363, divided as follows: 15 honorary, 234 resident, and 114 non-resident members, the average attendance for the year being 72.

DR. J. E. COOK, chairman of the committee, called the attention of the society to the new medical home or homestead purchased by the Medical Library Association, and a discussion of its merits as a permanent meeting place for the Cleveland Medical Society followed, led by Drs. Sherman, Humiston, Wirt, and Tuckerman.

The building is located on Prospect street, near Perry, and offers inducements for general society work and library facilities for the profession, as well as a promising means for the social advancement of the different societies interested.

DR. N. STONE SCOTT reported a case of carcinoma of the breast, with operation.

DR. G. W. CRILE reported the painless removal of a little finger by the use of cocain applied at the elbow to the ulnar nerve.

DR. HAMANN exhibited several specimens of gall bladders, normal and pathologic, and also specimens to illustrate exostoses and contraction of ligaments.

DR. ROSENWASSER exhibited specimens taken from cases of extra-uterine pregnancy, double pyosalpynx and papillomatous cystoma.

DR. M. ROSENWASSER, the retiring president, read an interesting address in which the work performed during the year by the society and its several committees was reviewed. Due mention was made of the deaths of Drs. O. F. Gordon, F. L. Thompson, G. O. Butler and J. F. Armstrong.

The doctor urged upon the society the necessity of an endowment fund for the maintenance of the new medical home, and mapped out a scale for subscriptions which he believed to be practicable for raising the amount required.

Correspondence.

CLEVELAND, O., Feb. 15, 1898.

Editor Cleveland Medical Gazette :

That there is a decidedly prevalent practice among druggists of prescribing indiscriminately over the counter, and in adding insult to injury by substituting what they have in stock for one or more articles called for in physicians' prescriptions, but which they are "just out of," is a fact of daily occurrence. This course is most reprehensible and does a great injustice to both doctor and patient.

That there are honorable pharmacists who firmly refuse to attempt the rôle of physician and who take pride in compounding prescriptions precisely as they are written, we frankly admit; but that there is a vast number who will grasp the opportunity to prescribe for some willing dupe without the least conception as to the nature of the ailment, and who will add "anything to fill the bottle," is also a fact well known to many practitioners. Still another form of dishonesty is recorded where a druggist had been in the habit of dispensing a commercial article of chloroform from a bottle bearing a Squibb label, under the pretext that it was the latter's preparation. Such trickery on the part of those in whom we have placed confidence naturally raises the question as to the best course to adopt to put a stop to such deception. The plan pursued by many physicians of dispensing their own medicines has much to commend it; and now that nearly everything in the materia medica can be obtained singly or combined in compressed tablets or other suitable form, it is a matter of little inconvenience for them to do so.

Another point gained by the physician in furnishing the remedy is that each refilling of the prescription, whether for the original patient, or his uncles, cousins, or aunts, is that it must be obtained through the prescriber, and not the druggist, thereby placing the remuneration where it justly belongs.

The modern tendency to seek after something new in the way of therapeutic agencies has no doubt caused some of the older remedies to be set aside before all their virtues had been fully brought to light, or really excelled. But fortunately the tide is now turning and some of the drugs which had been placed on the "retired list" are again coming into use on account of the discoveries being made that they possess properties which in some important respects are of greater value than are to be found in some of the synthetical compounds with which the market is now flooded, and which are lauded in such extravagant terms by various manufacturers. In this connection the writer recalls to mind a case of puerperal septicemia, as well as several cases of septic trouble following abortion in which the removal of fetor, and a lowering of temperature, was more speedily and effectually brought about by intra-uterine injections of solutions of potassium permanganate than was accomplished by the use of creolin or lysol faithfully employed. No doubt other physicians have had similar experience.

Dr. John S. Isham, whose death occurred at his home in Glenville, February 10th, was born at Portland, Mich., Oct. 8, 1846. After graduating from the public high school, he studied medicine for three years under Dr. B. F. Willey, of his native place, at the end of which time he attended a one year's course of lectures at the University of Michigan, subsequently completing his medical education at the Bellevue Hospital College, New York, receiving the degree of M. D. from the latter institution in the spring of 1874. In December of the following year he located in Cleveland, opening an office on St. Clair street, near Case avenue, and from that period until his fatal illness was actively engaged in general practice, a greater portion of which was devoted to obstetric work, which was quite extensive. Dr. Isham was truly a faithful physician and a kind-hearted gentleman. The many attractive personal qualities which he possessed drew to

him an extensive clientage, and as a result he has left a host of friends who greatly mourn his untimely death.

The cause of death was leptomeningitis, as revealed *post mortem*. During the two weeks' sickness the symptoms were quite obscure, so much so as to puzzle the several physicians who saw the case, a subnormal temperature for nearly a week before death giving the impression of a possible cerebral abscess. At no time was there any intolerance to either light or sound, neither was there vomiting or evidence of cortical pressure.

If there was ever an instance in which it could with truth be said that a physician had died a slave to his profession it was in the case of Dr. Isham, who, as the result of an exacting clientele was deprived of rest and sleep much of the time, and although of a robust constitution was thoroughly worn out when the final illness developed. Dr. Isham leaves a widow and one son.

CARLISLE.

Notes and Comments.

Dr. Louis Crusius, the well-known artist physician of St. Louis, died at his home on January 3. We are sorry to hear (through the *American Medical Journalist*) this piece of news. The profession far and wide has enjoyed Dr. Crusius' unique productions, especially the calendars of his designing.

Do as You would be done by. When called to a case to supplant a brother practitioner, do you inquire whether his fees have been paid him in full to date of discharge? This is one of the ways of securing for the profession of medicine the respect which is so richly deserved but so rapidly disappearing.—*Medical Record*.

No Time without Money. According to the *American Medical Journal*, many leading physicians of the West are causing signs to be placed in a prominent place in their offices. They read as follows: "Time devoted to solicitors and agents will be charged for at the same rate as office consultations."

Mr. Ernest Hart, famous as editor of the *British Medical Journal*, much respected as a physician and highly esteemed as a man, died at his home in London on January 8th.

The Dispensary Abuse. The *Medical News* of December 19th (*North Am. Med. Review*), under the head of "The Passing of the Physician," pertinently says:

"And the weary and struggling outside general practitioner can go home, shut himself up with his emaciated wife and starving children, and turn on the unlighted gas.' These words are not written in jest, but embody the sober thoughts of one who has for twenty years watched the growth, abuse, and degradation of medical charity, hand in hand with which have increased the hardships of the general profession. Let the incredulous glance at a few figures. In the year 1893, 76,094 patients were treated in the hospitals of New York City; during the same year, 680,789 patients were treated at clinics, dispensaries, and out-patient hospitals. If we make a liberal allowance for re-duplication, there will still remain a stupendous and staggering array of figures." In the *Virginia Medical Semi-Monthly* for December, Dr. L. Eliot, of Washington, writes: 'That the abuse of medical charity in this city can be remedied—in fact, can be entirely abolished—cannot be successfully denied; it only needs the application of a few business principles with the enforcement of the regulations of the medical association.' It would seem that after the excoriating exposures of Dr. Lanphear, of St. Louis, in the late issues of the *American Journal of Surgery and Gynecology*, in which many leading St. Louis physicians were shown up in the most unenviable light, the dispensary abuse must have received there a Fitzsimmons blow in the region of the umbilicus, but before the practice of medicine is entirely ruined to satisfy notoriety hunters war must be made all along the line in other cities."

Our Exchanges from the Pacific Coast and the far Northwest contain among their personal and news items many concerning doctors who have gone to Alaska. While the physicians of the Middle States are sufficiently numerous that the absence of a few would not leave the sick without medical care, it will not be necessary for them to supply the demand in Alaska. The brethren of the Northwest can get there much more readily, and may be trusted to "get there," in every sense, as promptly and as numerously as needed.

Danger from Cocain. The chief accusation against cocain is its danger. If given in overwhelming doses it is dangerous; so is any drug. Why surgeons should in-

ject four or five grains of cocain and, getting a fatal result, blame the cocain, when the maximum dose is usually given as one grain, is more than we can understand. If they measure the amount of the cocain injected and adhere to the dosage, there would be far fewer complaints. And if dangerous symptoms develop we have an almost certain physiological antidote in morphin—a fact that has not attracted the attention that it should. It has been proven that if a dose of morphin be previously administered, ten grains of cocain can be taken with impunity.—*New York Polyclinic.*

A new book by Dr. Keen on Surgical Complications and Sequels of Typhoid Fever is soon to be issued at Philadelphia by Mr. W. B. Saunders.

Lehmann's Hand Atlases, a famous German publication, are soon to be issued in English. The translations are to be directed and edited by leading American specialists in the different subjects. There will be the Atlas of Internal Medicine and Clinical Diagnosis, by Dr. Chr. Jakob, of Erlangen, edited by Aug. A. Eshner, M. D., professor of clinical medicine in the Philadelphia Polyclinic; The Atlas of Operative Surgery, by Dr. O. Zuckerkandl, of Vienna, edited by J. Chalmers Da Costa, M. D., clinical professor of surgery, Jefferson Medical College; Atlas of External Diseases of the Eye, by Dr. O. Haab, of Zurich, edited by G. E. De Schweinitz, M. D.; also atlases of Legal Medicine, of Laryngology, of Venereal Diseases, and of Skin Diseases, by equally well-known authors and editors. Mr. Saunders promises that the beautiful German lithographs shall appear in the American edition in all the original exquisite colorings.

Lakeside Hospital was formally opened on January 12th with appropriate exercises and address and a reception. A large number of invited guests availed themselves of the opportunity so given to inspect all parts of the hospital. A full description and the ground plan of the hospital were published in the GAZETTE twenty-one months ago.

Medical Anachronism in Fiction. Harry Thurston Peck, Professor of Latin at Columbia University, in a review of "Quo Vadis" says: "There is an anachronism involved in the introduction at the end of the ninth chapter of a freedman 'with his face marked with smallpox;' for no mention of smallpox in Europe is found till four hundred

years after the period described in 'Quo Vadis,' and no Roman author speaks of such a disease."—*Medical News*.

There is a Movement on Foot in Berlin to provide free courses to physicians, in which they shall be instructed in all the laws bearing on the profession and its practice. As it is now, there exists a sad ignorance on these matters among the younger men fresh from the university. According to the plan proposed a physician shall receive clear explanation of the laws concerning accident, insurance, judiciary functions, etc., and it is thus hoped to protect him from the injury and annoyance to which he is so often exposed.—*Medical Record*.

Meiotics or Myotics? In the January number of the *Dublin Journal of Medical Science*, in a review of an American book on therapeutics, the writer asks for the authority for the spelling "meiotics" in lieu of the ordinary form, "myotics." "Is not myotic," he asks, "the adjectival form of myosis, and is not this derived from μύω, to shut the eyes (μύωψ, short-sighted), rather than from μείω, less?" We think not. Liddell and Scott give μείωσις (from μείω) as meaning diminution, the opposite of αὐξήσις and cite Hippocrates among other authorities. They give also the adjective μειωτικός as meaning lowering, diminishing. They do not give μύωσις or μυωτικός at all, but they do give μυωπός as the equivalent of μύωψ, short-sighted. Now, we take it that meiotics have nothing to do with short-sightedness or with closing the lids (which latter is the primary meaning of μύωψ); their action is to cause *diminution* (μείωσις) of the size of the pupil.—*New York Medical Journal*. It might be added that better forms of the word are "miosis" and "miotic," as being more in accord with the movement toward a simpler spelling of English words, and corresponding with the reduction of the diphthong to the single vowel in other cases.

The Following Letter was received by a well-known physician of this city. The recipient not considering himself an expert in hydraulics, thought it best to submit the report and the inquiry to the profession at large through the GAZETTE. He modestly requests us to omit his name from the letter. We do not remember hearing of such a stream being turned out by one man since the days of Hercules, yet we are not prepared to say whether this phenomenon is so extremely rare or not. Ability of this kind might prove to be quite common if

searched for; or might be cultivated by practice, and be made one of the requisite points in the examination of candidates for the fire department. Some readers may incline to call it a fish story; but, though it does at first scent seem rather piscatorial, we believe the writer is honest and sincere, and hope some of our readers may be able at least to throw a search-light upon the puzzle:

FALLS CREEK, PA., Jan. 24, 1898.

—————, M. D.:

DEAR SIR:—I take the liberty of reporting a phenomenon (at least to me)—a case of long distance urinating.

A gentleman of middle age, with all ease and without any seeming effort can propel his urine 40 feet; can stand erect and lift it 14 feet with same ease. With report I desire to ask where he gets the force or power required? It puzzles me and that's why I ask.

Very respectfully,

R. M. BOYLES.

P. S.—Is this a rare case? I do not recall seeing any reported.

Singultus. Dr. E. Olonzo Giere reports a case in the *Northwestern Lancet* as follows: "A most obstinate case of hiccough came under my care recently, which caused me to read up all the literature within my reach on the matter, and after I had exhausted all the therapeutical means, without success, laid down by the various authors, I was forced to do some original thinking, and as will appear from what follows, a considerable amount of experimentation. The patient, a married man, forty-nine years of age, was taken with a chill one day, and inside of two days the hiccough ensued. After three days of constant hiccough I was called in. The patient was an emaciated subject, being a sufferer from a gastric chronic catarrh. From the history obtained and the conditions present I concluded that the cause was located in the stomach. The patient was unable to take food and if any was taken it would be at once ejected." After using a great number and variety of remedies directed to the stomach without effect, a change in the plan of treatment is described as follows:

"Discouraged with everything I had tried the four nights in succession I had spent with him, I decided to do something for his throat, and thinking that cold applications to his throat might exercise a favorable influence on the phrenic nerves, I resorted to this and gave by in-

halation creolin and vinegar in boiling water as a soothing and antiseptic astringent to the irritated membranes. These simple measures had the desired effect, and in a short time controlled the singultus, which so far had resisted all the hygienic, dietary, mechanical, and therapeutical measures I had employed. It was also demonstrated to my satisfaction that the cause in this case had its seat in the throat, although there were present no symptoms to lead me to suspect it, while the history and gastric symptoms were so prominent in favor of the cause being in the stomach."

Immediate Suture for Fractured Clavicle. Dr. E. M. Foote presented a case of this nature. The patient was a boy who had his clavicle broken by a piece of machinery, with no injury to the soft parts of importance. He was seen two days after the accident. The fracture could not be reduced, and four days after the injury an incision was made; the bones were exposed, but even then they could not be brought into position. The bones were drilled, then brought together and sutured with kangaroo suture. The periosteum had been torn from a small part of the end of one fragment; this suppurated a little, but recovered and now the union was strong. Dr. Foote said the operation was not a common one in this country. Spencer reported a few cases, and one case was reported in the *Annals of Surgery* last year, but in Europe a number of cases had been reported. The results were good. Many cases of broken clavicle healed without any treatment, but this method might be employed with good results in cases in which the fracture was irreducible or would not stay reduced, or in which there was interposition of muscles between the fragments, compound fracture, or hæmatoma. It might be employed as a secondary operation in case of pressure upon a nerve. Most operators had used silver wire, and some silk, but there was no special reason why an absorbable suture should not be used.—*New York Polyclinic.*

Dr. J. F. Baldwin, of Columbus, has had the courage to devise and present to the profession a new operating table calculated to tip a lady up or tip a lady down with the greatest ease and convenience. A description with cuts may be seen in the *Journal of the Am. Med. Ass'n* for January 8th.

Dr. J. V. Heckerman, one of our old subscribers, has

been in constant practice since March 2, 1846, with almost no vacation. He has been located at Tiffin, O., during the last forty-nine years, having practised three years before at Gettysburg, Pa. The doctor now contemplates taking a vacation. We hope he has not forgotten how to do so, and heartily wish him a good time.

Dr. John W. Hamilton, of Columbus, died January 1st.

Ye Staff of Ye Ancient Doctor. The long gold or silver-topped staff of ye old time doctor, that we so often see in old paintings and engravings, was not alone a circumstance of pomp. In a cavity of the symbolic and often jeweled top was concealed an aromatic powder that arose through minute perforations in an odorous cloud when the bewigged and pompous physician vigorously pounded the staff on the threshold of the sick room. He was wont to march solemnly about the room alternately beating the staff on the floor and applying the top to his nostrils, expecting thereby to gain immunity from the contagion. There seemed, also, to be an almost poetical idea involved in this ceremonial antiseptic of our ancient predecessors. When he had departed there was left an odorous presence that seemed to cling like healing balm to the room of the sufferer.

The American Text-Book Series continues to increase in numbers at intervals. The volume on Genito-Urinary and Skin Diseases was to have appeared ere now, but is said to have been delayed by the very large number of fine engravings which it is to contain.

Labor Ipse Voluptas.

I drove one cold night, years ago,
When fierce blew the storm and the snow,
To help a poor mortal in pain,
Who long had in agony lain.
And oh!—

How cold did that winter wind blow.

I said not a word, as to pay;
I thought but to speed fast away,
To help that poor mortal in woe,—
'Mid storm and the cold and the snow.

And say,—

I got not a cent to this day.

W. G. Kemper.

THE Cleveland Medical Gazette

MARCH, 1898.

Original Articles.

SERUM THERAPY IN SURGICAL DISEASES.*

BY FRANK E. BUNTS, M. D.,

Professor of Principles of Surgery and Clinical Surgery, Western Reserve University; Visiting Surgeon to Charity Hospital, Consulting Surgeon to Cleveland City Hospital, etc., etc.

A report on Progress in Surgery is so full of possibilities and so far-reaching that notwithstanding that I have accepted the invitation to make such a report, I have taken the liberty to select one line of progress and shall therefore confine my remarks to serum therapy in its application chiefly to surgical diseases.

The treatment of certain diseases by antitoxins has established itself apparently upon a most substantial foundation, and the profession generally, I think, is looking forward, some confidently, some skeptically, and a few indifferently, to the day when we shall be able to cope with a fair degree of precision and success against many of those diseases which have thus far pursued their own course, either fatal or otherwise, practically uninfluenced by the physician's or surgeon's art.

One of the most striking innovations in treatment has been the introduction of an antidote for septic infection, namely, the antistreptococcic serum. The fatal

* Read before the Cuyahoga County Medical Society, January 6, 1898.

ravages of blood-poisoning promise soon to be stopped by this new candidate for our favorable consideration.

Antistreptococcic serum is prepared by producing a very virulent culture of streptococci by passage of the germs through a series of animals, and maintaining the attained virulence by the use of a proper culture medium, the best being a mixture of human blood-serum (2 parts) and 1 per cent. peptone bouillon (1 part). By growing the streptococci alternately in this medium and in the body of rabbits, cultures have been obtained of almost incredible virulence. Horses and cows have been immunized by the subcutaneous inoculation of cultures, and after a period of six months the serum of these animals was found to possess immunizing and, to a less extent, curative powers. Marmorek (*Ann. de l'Inst. Pasteur*, July, 1895) considers all pathogenic streptococci as belonging to the same species, the lesion varying with their degree of virulence and point of entrance.

W. Edmunds reports a case of puerperal septicemia (*Amer. Jour. Med. Sc.*, April, 1897), in which a knee-joint abscess had formed, treated by this method without any other treatment, resulting in perfect recovery.

An editorial in the *Lancet*, Jan. 9, 1897, calls attention to the fact that the effect of antistreptococcic serum is most marked when given early in the development of the disease, but that amelioration of symptoms has occurred even in severe cases of infection, particularly puerperal cases, after its use, and has been reported by a number of French writers (Patrie, Maillart, Ribemont, *et al.*). Boucheron speaks highly of his results in the treatment of purulent dacrocystitis by injections of 5 c.c. repeated at intervals of a few days, even chronic cases being markedly improved by this method.

C. P. Thomas (in the *Jour. Amer. Med. Ass'n*, Dec. 18th) reports eight cases treated by injections of 10 c.c. of Marmorek's serum, all of which recovered. Of these cases, 3 were erysipelas, 2 suppurating appendicitis, 1 a ruptured pustule, 1 a leaking pelvic abscess, and 1 acute sepsis coming on nine days after labor. These cases all

received ordinary surgical treatment, but the severity of some of them and their rapid improvement under serum treatment seemed to be directly corroborative of the value of this treatment.

In a somewhat elaborate review of the subject of streptococcic infection, Dr. G. W. Cox, of Chicago, has collected a large number of reported cases, both from abroad and at home, which seem conclusively to prove the value of Marmorek's serum. In this collection of cases we find that in addition to the ordinary cases of septic infection it has been used in the treatment of diphtheria, scarlatina, endocarditis, appendicitis, adenitis, and otitis.

Its use even in tuberculosis has been followed by marked improvement of subjective symptoms, and by doing away with the mixed infection due to the streptococcic infection has left the patient in a condition better able to resist the tubercular disease. Emphasis is laid upon the point that only those cases in which the streptococcus is found by bacteriologic examination may be expected to find benefit by this treatment, and reported cases of failure or no improvement, such as those reported by Dr. R. F. Weir in the *Medical Record*, May 1, 1897, can have but little weight against the value of the serum treatment, since in only one of these cases was it reported that streptococci were found.

Dr. E. H. Grandin, of New York, reports at length a case of perforating appendicitis with general purulent infection of the peritoneum, in which, in addition to ordinary surgical procedures, Marmorek's serum was used, and in conclusion sums up his estimate of its effects as follows: "Temperature and pulse rate were uniformly lowered after each administration, elimination of waste infectious products was favored, as was evidenced by the greatly increased action of the kidneys; pus production was apparently checked, for whereas before the use of the serum pus pocket after pus pocket was forming and infectious elements were being rapidly absorbed into the system; not alone after the injection of the serum did pus production cease, but the infiltrated flaps cleaned up far

more rapidly than he had ever before seen. He had every reason to anticipate progressive systemic infection and death, but instead witnessed a rapid throwing off of sepsis, and recovery.

Dr. H. Siff, of New York, reports an interesting case of puerperal septicemia seen by himself and Dr. P. F. Mundé, in which both gave a fatal prognosis, but advised, as a last resort, the use of antistreptococcic serum; this, having been reluctantly consented to by the family, was tried, and the patient made a rapid and complete recovery.

Dr. R. A. Bowie, of Brockville, Ont., reports a case of stitch abscess following an abdominal operation, which resisted all routine treatment for five weeks, but responded rapidly and satisfactorily under antistreptococcic serum treatment.

It would not be difficult to multiply reports of cases very greatly, for the antistreptococcic serum is being used very extensively both at home and abroad, but I may draw as conclusions from the cases which I have copied, and from many others which I have not: 1. That Marmorek's serum is of special value in the treatment of erysipelas. 2. That cases of general peritonitis in which the streptococcus has been proven to be present have generally been markedly benefited by this treatment. 3. That while various diseases, such as puerperal fever, scarlet fever, arthritis, otitis, etc., have been reported as cured, we should not confidently expect to find improvement except in those cases which have been proven bacteriologically to be genuine cases of streptococcus infection. 4. The ordinary dose is 10 c.c., though this may be greatly increased. 5. One case, at least, of death has been reported as following these injections and apparently attributable to them. The serum when sterile, however, is believed to be harmless. 6. Only sterile preparations should be used, and therefore it would be best to have the serum put up in vials representing the usual dosage for one administration, so as to avoid the possibility of impurities creeping in.

While antistreptococcic serum has met with such

ready acceptance at the hands of the profession, owing to the ever-present opportunities for its use, other serums have been working their way into more or less prominence, and among these, perhaps, the antitetanus serum has attracted most attention in its application to tetanus in man.

Dr. F. S. Dennis, of New York, in a paper read at the New York State Medical Association, Oct. 13, 1897, on the subject of tetanus, says that it has been proven beyond a doubt that this disease is due to the germ discovered by Nicolaier in 1884, and that the toxins of the disease are capable of producing all the phenomena of the disease without the pathogenic presence of the bacillus itself. As a result of his exhaustive and scientific study of the subject, he could not feel warranted at present in coming to the conclusion that tetanus antitoxin would always cure tetanus, yet it did show that it was a remedy of the greatest value, particularly in connection with immunization and prevention. No animal had ever died from tetanus which had been rendered immune by the tetanus antitoxin previous to inoculation with the disease. According to Welch, the results were better in proportion to the length of the inoculation period, and that this remedy was of little or no value if this period was less than ten days, or if convulsions had already set in. The prophylactic treatment of tetanus was limited to those cases in which the wound had been inflicted in such a manner as to allow garden earth, or the plaster from walls, or a rusty nail to come in contact with it.

Dr. Dennis, in conclusion, said that it had been fairly well demonstrated that the mortality in cases of tetanus treated without the antitoxin was 60 per cent., as against a death rate of 30 per cent. under the antitoxin treatment. He said, further, that five cases had been reported within a few days in which the antitoxin had been used in trismus nascentium with complete success in all of the cases.

In contrast to this conservative estimate of its value we have the statement of Nocard in a report to the Académie de Médecine of Paris, as the result of careful and thor-

ough investigation, that antitetanus is unfailingly and absolutely effective in preventing tetanus. This statement, however, should be modified by stating that his statistics referred alone to animals, such as horses, donkeys, bulls, rams or lambs, and hogs.

Dr. J. W. Cokenower, of Des Moines, reports a fatal case of tetanus in which the antitoxin was administered, beginning on the fourth day, but spasms were then occurring at the rate of about 75 per hour. As a result of his experience he feels safe in saying that the frequency of the spasms was greatly lessened — 10 per hour — respiration and heart's action better, and deglutition possible in a limited degree. His supply of serum was limited, and upon the cessation of its administration the favorable symptoms ceased, and the patient died in six days.

I have personally used the antitetanus serum in consultation with Dr. Long, of this city, but as the doctor intends to report the case in full I will only say that the case terminated fatally.

The use of anti-anthrax and antistaphylococcic serum has received some attention, and no doubt we shall hear many reports from them during the ensuing year, but notwithstanding the present meagerness and uncertainty of serum therapy, I feel that the profession generally, and surgeons particularly, are to be congratulated upon the brilliant prospects for the future which the untiring devotion of scientific workers in this line of research is opening up for them.

INFANTILE CEREBRAL PARALYSIS.—JOINT AFFECTIONS.—PLANTAR NEURALGIA.*

BY STEWART LE ROY MCCURDY, A. M., M. D., PITTSBURG, PA.,
Member American Orthopedic Association; Orthopedic Surgeon to Presbyterian Hospital; Professor of Anatomy and Oral Surgery,
Pittsburg Dental College; Dean, Pittsburg School
of Anatomy; Member American Medical Association, etc.

INFANTILE CEREBRAL PALSY.

Infantile cerebral palsy is also known as infantile spastic paralysis. It is characterized by spastic paralysis of muscles and groups of muscles growing progressively worse, associated with atrophy, is of cerebral origin, and usually associated with some impairment of intellect.

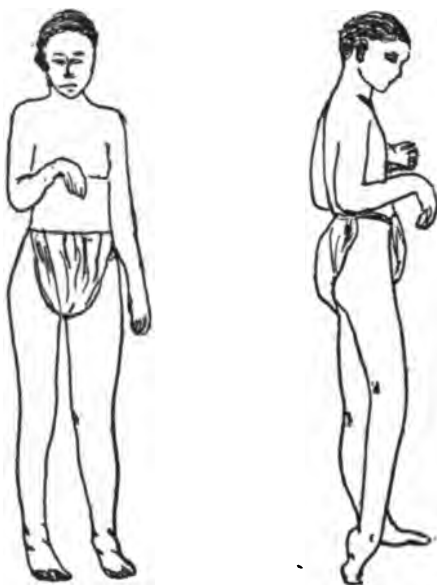
Two varieties are recognized, viz., infantile hemiplegia and spastic paralysis (Tubby). American authors recognize three varieties, basing the classification upon the symptoms presented, viz., hemiplegia, spastic paralysis, and incoördination.

The *etiology* as given by Osler and others is: 1. Hemorrhage during convulsions and violent coughing, or injury by forceps or other trauma during delivery, or premature delivery. 2. The eruptive and other fevers, resulting in embolism, encephalitis, or microcephalus. 3. Thrombosis of cerebral veins. 4. Consanguineous marriages, fright, mental emotions, or drunkenness during gestation.

The *symptoms* of *hemiplegia* may be absent until deformity is discovered, the onset being gradual. In some cases the disease may be ushered in by fever, convulsions, and coma. In about 50 per cent. of cases there is paralysis of the face, with greater paralysis of the arm and the leg, which continues throughout the course of the deformity. The leg recovers more rapidly than the arm, sensation and electrical reaction remain normal, and the reflexes are exaggerated. Rigidity is more severe during efforts to move the parts, but it disappears during sleep or anesthesia. Aphasia is an early symptom, but disap-

*Advance chapters Dr. McCurdy's Manual of Orthopedic Surgery.

pears as other symptoms improve, although in severe cases it remains as a permanent defect. Backwardness, imbecility, or idiocy is found in the majority of cases, although a few cases have no impairment of intellect. Epileptic seizures form a complication in a few cases. The forearm assumes a typical position of flexion, both at the elbow and wrist, and the shoulder is sometimes raised. The thigh is flexed and adducted, the knee is flexed, and the foot is in equinus or equino-varus. The entire side is right.



INFANTILE SPASTIC HEMIPLEGIA (THORNDYKE).

In bilateral spastic paralysis the spastic condition is noticed soon after birth or after an acute sickness. The legs are extended and the thighs are adducted, the legs may be crossed with the feet in equino-varus. The arms are held close to the side, with the hands pronated and in an awkward position. Atrophy may not be marked. There may be choreic spasms of the face and tongue, with strabismus or nystagmus. The gait is awkward. The mental condition is defective and associated with microcephalus. Teeth are defective. Epilepsy is not so

common as in hemiplegia. In some cases there is paraplegia. The symptoms are much the same as found in the foregoing varieties. The marked difference is that there is greater deformity of the legs and less impairment of the intellect. In all varieties the gait is peculiar, the head is raised, the toe turns in and drags, and the tread is stiff and jerky, while in infantile spinal paralysis the leg hangs loose, and the gait shows weakness of the affected leg. The pathological changes are those which would result from the causes already enumerated. There may also be cord sclerosis.

A *diagnosis* is not difficult when deformity or contractures exist, but previous to that time it is not easy to differentiate this variety of paralysis from other paralyses.

A differential diagnosis must be made from infantile spinal paralysis, cretinism, contractures resulting from nervous injuries, and hip-joint disease. In studying the spastic condition of muscles in this disease it must be remembered that with the rigidity in hip and other joint disease the joint is stiff, *i. e.*, no motion is permitted in any direction. In the disease under consideration, while the joints are rigid they will yield to pressure and unfold as it were, as a lead pipe is bent, but when pressure is removed the extremity assumes its former position.

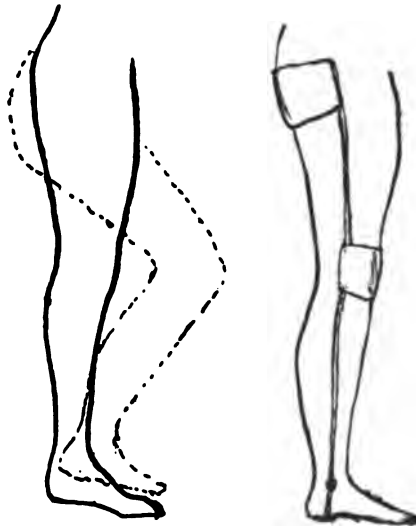
Atrophy is not so great as in infantile spinal paralysis, and in some cases it is very slight.

Prognosis should be guarded. There is generally some improvement, and the disease does not greatly shorten life, unless there are marked cerebral symptoms. A perfect cure can in no case be promised.

The *deformity* can be corrected by operations and mechanical appliances, but there is no certainty that it will not return during the course of a year or so, unless prevented by retaining apparatus, worn constantly.

The *treatment* may first be directed to the early pathological changes which produce the deformity, as hot baths, cold to the head, purgatives, bromids, and choral, when the case is seen early.

The paralysis demands massage, electricity, and warm clothing, appliances adjusted early to prevent deformity, which consist of braces made to fit the individual case. When deformity is found it is corrected by tenotomies of the contracted tendons, which should be done subcutaneously, and the joint forced into a normal position. Retaining appliances are to be adjusted to suit the case. For immediate retention after operations, plaster



BRACE FOR PARALYSIS OF QUADRICEPS.

of Paris must have the preference, and as a permanent support braces are to be devised for every case.

CHARCOT'S DISEASE.

Charcot's disease is a chronic joint disease due to some lesion of the nervous system and characterized by great destruction and deformity of the joints, associated with tabetic symptoms.

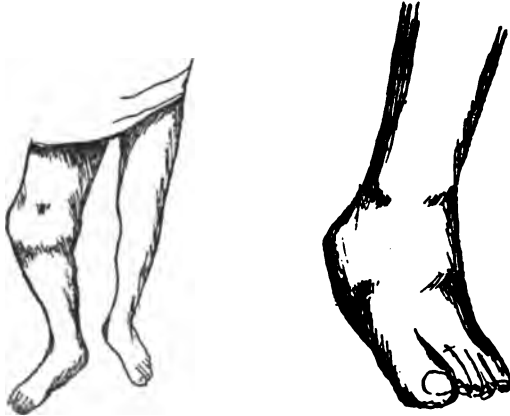
Etiology. Charcot's disease is due to a lesion of the posterior columns of the spinal cord. Tumors of the gray matter of the cord, general myelitis, and injuries of the peripheral nerves may also produce it.

Age. It is a disease of advanced life.

Deformity. While the knee is the joint most fre-

quently involved, it may affect any joint. The shoulder, elbow, ankle, hip, and wrist are also seats of the disease. There may be great distension of the joint due to abnormal accumulation in the cavity and to the displacement of the heads of the bones.

Pathology. Every structure in the joint is included in the process of destruction. The epiphysis melts away or the inside of the head of the tibia and the external condyle are destroyed, allowing the heads of these bones to rest alongside of each other. The tendons, cartilage, etc., are disorganized. Roberts classifies the changes as follows: 1. Chronic asthenic hyperemia of the synovial



CHARCOT'S DISEASE (AFTER YOUNG).

membrane, a hydrarthrosis. 2. An interstitial atrophy of the epiphyses. 3. Fungous or varifying epiphyseal hypertrophy. 4. The formation of osteophytes and bony stalactites.

Symptoms. The onset is rather sudden, and among the first symptoms are the beginning deformity, without pain, absence of patellar reflex, and destruction of the joint. In addition to these may be found the Argyle-Robinson pupil and more or less inability to stand or walk in the dark or with the eyes closed. Patients are able to get about with a cane even when great destruction of the joint with angular deformity exists. As early symptoms there may be weakness and giddiness with shooting pains

through the extremity. The walk is toe and heel, or the characterized gait of locomotor ataxia.

The local symptoms of redness and swelling, while not marked, may be found with slight tenderness on pressure during the early stage. There may also be some pain during the early stage. The muscles become rapidly wasted, and there is absence of patellar reflex, and electrical reaction is wanting.

Diagnosis must depend upon the consideration of the preceding symptoms, which point to the spinal cord disease with great destruction and free movements of the joint.

Differential diagnosis must be made from arthritis deformans, in which there are pain, restriction of motion, and slow onset; from arthropathies in syringomyelia, in which condition the joint involvement is confined to the upper extremities and is characterized by enlargement of the epiphyses; and from arthropathies of acromegaly, in which condition there is present enlargement of the bones and soft parts, especially of the inferior maxillary.

Prognosis depends upon the control which may be had of the tabetic condition. If the cord changes can be cut short and improved, the destruction of the joint will stop, although little if any improvement in the joint can be expected.

Treatment includes tonics, iodid of potash and strychnia, both of which must be given in large doses. Absolute rest to the joint is necessary. The joint should be supported by splints or plaster of Paris, including elastic pressure, as the bandaging of a sponge or cotton about the joint. Massage and electricity must also be used, and S. Weir Mitchell considers the latter of value. When the nervous symptoms have been controlled, excision must be done to give the patient a more useful joint.

ARTHROPATHIES OF SYRINGOMYELIA.

Deformities of this disease of the spinal cord are confined to enlargements of the upper extremities. People who extensively use the hands and arms are more likely to be affected.

Pathology. The central lesion is a dilatation of the central canal of the spinal cord. The usual joint lesion is hypertrophy, although there is atrophy in a few cases. Young says: "The enlargement of the joint is due to vegetary arthropathies characterized by asthenic hyperemia and interstitial atrophy leading to erosion of the articular surfaces, and fungous epiphyseal hypertrophy." Osteomata of the tendons and muscles are found in this as well as in Charcot's disease.

Symptoms. 1. The joint lesions show before the sensory disturbance. 2. Development is rapid, with rapid enlargement of the joints. 3. Muscular atrophy. 4. No pain or fever or constitutional disturbance. 5. Ligaments soften and relapse. 6. Lateral movements with crepitation, but without pain. The course is chronic and may continue over a period of from fifteen to twenty years.

Prognosis is unfavorable and curative treatment is not known.

ARTHROPATHIES OF ACROMEGALY.

Acromegaly is mentioned here since the enlargement of the ends of the long bones which characterizes the trouble is liable to be confounded with Charcot's disease in the lower extremities and syringomyelia in the upper extremities. It is characterized by an enlargement of the bones and soft parts, especially of the inferior maxillary, which may become enormously enlarged, projecting the lower teeth above the upper; the supraorbital ridge, the costal cartilages, sternal ends of the clavicle; later the scapulæ and vertebræ. As later deformities, the hands, feet, and nose may become enormously enlarged.

As a pathological lesion, which is no doubt a hint as to the cause, there is found enlargement of the pituitary body and thyroid gland. Sclerosis of the lower cervical sympathetic and hypertrophy of the mucous membrane of the nose are found. As evidence of the central origin of the disease the deformities of the extremities appear bilateral. Headache is a prominent symptom.

Prognosis is bad, since no treatment is known to cure

the disease. The progress is very slow, requiring in some cases many years before fatal termination.

PLANTAR NEURALGIA, OR METATARSALGIA.

Metatarsalgia is a painful affection of the foot first described by Thomas G. Morton of Philadelphia, and frequently known as Morton's disease. It is characterized by pain in the bottom of the foot, generally along the distal end of the metatarsal bone of the fourth toe. It is accompanied in some cases with swelling of the foot and suffering so intense as to make the foot practically useless. Morton first described the condition in 1876, and has reported four cases.

T. S. K. Morton has written upon this subject and reported cases. Other articles have been written and cases reported by Meade, Kemper, Goldthwaite, Mason, Grau, Gross, Agnew, Roswell Park, Gibney, Bradford, and Woodruff. The most recent article upon this subject was written by Robert Jones, of Liverpool, who reports seventeen cases. Auguste Paulloson of Lyons, France, reports one case and calls it "Anterior Metatarsalgia."

Morton first thought that the pain was caused by pressure of the head of the fourth metatarsal bone upon the nerve, as it is found immediately underneath it. Goldthwaite of Boston says it is due to a breaking down of the anterior transverse arch of the foot.

Robert Jones opposes the views of Dr. Morton, in the following language:

"1. The plantar digital nerves, instead of passing between the heads, lie on the transverse metatarsal ligaments, and when the foot is pressed upon are pushed away from, not between, the bones.

"2. It is not proved that the anatomical position of the heads of the third, fourth, and fifth metatarsals is favorable to a nipping of the nerve on lateral pressure; on the contrary, there would be less escape were the metatarsal heads in absolute line.

"3. In the majority of cases, a painful spot can be found and made intensely sensitive by pinching with the

thumb on the dorsal and the forefinger on the plantar surfaces. That such spot is usually quite local, and would not respond to such pressure if, as asserted, the pinched and sensitive nerves were placed between the bones.

"4. In most cases, a broadened foot, due to collapse of the anterior arch, accompanies the affection, rendering the digital nerves less liable to compression. This fact, in conjunction with another, viz., that a broad-soled boot hardly gives any relief in the third degree of plantar neuralgia, is strongly at variance with Morton's theory.

"5. In a large number of cases, grasping of the foot round the metatarsal heads, thus approximating them, relieves the spasm.

"6. Frequent flexing of the toes is an instinctive method of relieving spasm, the flexing of the toes being accompanied by slight approximation of metatarsal heads.

"7. Manipulations of the foot by the surgeon, other than applying direct local pressure, rarely produce the pain.

"I believe that clinical observations accord much better with a theory of treading upon, rather than with that of pinching, a nerve, and am fortified in this opinion by three anatomical facts: (a) The proximity to the painful area of the communicating fourth branch of the superficial division of the external plantar. (b) The collapse of the anterior arch in most of the cases. (c) The bulk of superincumbent body-weight in walking on the toes is borne on the first and fourth joints."

Treatment. Treatment of plantar neuralgia must vary with the stage of the affection. In the first stage the patient will do well to take the warning given, and by appropriate precautions prevent the development of the affection. This is done by attending to the following details: (a) To abstain from continuing any action which produces the pain. (b) To increase the depth of the inner aspect of the heel, in order to produce slight inversion of the foot. (c) To wear thick soles, with well fitting insteps, and roomy around the heads of the meta-

tarsals. (d) To insist that the sole be at least one-quarter of an inch thicker a little behind the base of the metatarsals.

The preventive methods as applied in the first stage should also be directed to the cure of the second stage, with certain additions, which may be any or all of the following measures: (a) A thick bar placed about half an inch behind the metatarsal heads. (b) A band of non-irritating plaster around the instep. (c) Massage of the foot, with contrast baths of hot and cold water. (d) Elevation of the foot of the bed during the night.

In the third stage of the affection nothing short of an operation is satisfactory. By this I do not mean that on no occasion can an advanced case be relieved by mechanical measures. On the contrary, it can and often is. But operative measures are so safe and simple and other measures so prolonged and troublesome, that most patients do not hesitate which course to accept.

Of operations, three are radical and efficient: (a) Excision of the metatarsal head. (b) Excision of joint. (c) Amputation of the metatarsal head and toe.

Short of these radical measures, we may employ any or all of the following measures: 1. Actual cautery. 2. Heated needle into painful area to destroy nerve. 3. Hypodermic injections of carbolic acid. 4. Partial excision of digital plantar nerve.

I desire to report the following case: Mrs. B., aged about 30, had been suffering with pain in the bottom of the right foot for about two years. All means for the relief of pain, including local treatment, mechanical appliances, and special shoes, had been used, and temporary relief, only, was afforded. A resection of the nerve was suggested and done. I was prepared to drill the head of the fourth metatarsal bone, if it appeared at all diseased, and if necessary, excise, but this structure appeared healthy and was let alone. The nerve, however, was larger than normal, and about an inch was resected. The soft structures were freely stretched throughout the region of the operation. The result has been quite gratifying to the patient and satisfactory to myself.

In making the incision its course should be crescentic, beginning in front of the metatarsal-phalangeal joint, in extending it around externally to this joint to a point immediately under the fourth metatarsal bone. The flap thus made can be dissected from the joint and such operation as necessary performed. The course of the incision throws the line of union between the fourth and fifth metatarsal heads and thus avoids pressure upon the cicatrices such as occurs when the cut is made directly over the head of the bone.

THE TRAINING SCHOOL FOR NURSES.*

BY MRS. HUNTER ROBB, CLEVELAND, O.

It was in a military hospital, amid the tumult of battle in the great Crimean war, that the modern system of nursing found its birthplace. Here came into existence a force born to do battle forevermore in the never-ceasing struggle for life. As the child of that war has increased in years it has grown mightily in strength, until to-day, although still young, its power is recognized in the East and West, the North and South. There is hardly a mission in foreign lands that has not its skilled nurses. In plague-stricken India, in the wars of both East and West; in the South with its fatal fever, and in the lands of the North, wheresoever plague, pestilence, or famine is to be found, there, too, side by side, is the trained nurse, quietly, silently doing battle. Even in our every-day lives we can scarcely turn our eyes in any direction without encountering her. There is not a modern hospital of which she is not an integral part. Scientific medicine would find it hard to do without her. In infirmaries, asylums, day nurseries, schools, church parishes, in the solitary sick-room, and among the poor in their homes she is doing her work. To few is it given as to Florence Nightingale, the heroine of the Crimea and the patron saint of nurses, to see so great results in so brief a time

*Read at the opening of Lakeside Hospital, Cleveland, Ohio, January 12, 1898.

from the seed she has sown. And it is the light of her lamp at night that still throws its shadow on the wall of many a hospital ward the world over, for none among her followers have a clearer or more penetrating insight into things pertaining to hospitals and nursing than has Miss Nightingale to-day. Long may that light, with its inspiring flame, burn among us.

Something over eight years ago in connection with the opening of that hospital which is the heart and center of scientific medicine in America, and in the possession of which medical men the continent over feel a truly pardonable pride, it was my privilege to speak briefly of the aims and objects of training schools for nurses. These eight years have seen many changes in the thought, work, and methods of the medical profession — changes which have necessarily exercised a great influence upon the training of nurses.

At the present time it would be considered out of date and only a sign of ignorance for a physician to affirm that all he requires of a nurse is that she should be a well-working automaton to carry out his orders, and that he would prefer that she should not know even part of his reasons for what is done for the patient. Such an idea, popular as it once was, has now fortunately become antiquated. The progress of medicine itself has taught that a very different intelligence is required of a nurse. The science of bacteriology, which in a few years has conclusively demonstrated the causes of many diseases, and her sister, "preventive medicine," require one and all who meddle with medicine, whether as physicians or nurses, to be people of intelligence. So long as drugs were looked upon as "cure-alls" for all bodily ailments, an automaton who would administer the doses at certain intervals may have perhaps answered every purpose; but at present some of our remedial or preventive measures would seem to the uninitiated to appear too vague and even far-fetched, so that it would be impossible to insure a conscientious carrying out of them unless the intelligence were appealed to. What, for instance, are we to under-

stand by cleanliness? For the uninitiated the sense is very clear. And yet there is a deeper meaning, which can only be appreciated by those who have mastered at least the broad principles of bacteriology. How hopeless and dull, not to say irritating, would be the many washings and the various aseptic precautions which are now required from the nurse by the physician, unless she had learned from bacteriology to appreciate the fact that there exists a surgical, a microscopical cleanliness. For this purpose, then, the nurse must have some knowledge of the broad principles of bacteriology. To appreciate fully the effect upon the patient of the air he breathes and the food he eats she must know something of ventilation and hygiene. For the proper care of the body she has to go to physiology. To become acquainted with the best forms and preparations of food, by which the greatest possible amount of bodily resistance to disease are established and maintained, she must profit by the demonstrations given in the diet school. Such matters of detail are usually entrusted to the nurse. She alone can devote to them such constant and unremitting attention as are necessary. It is true that the physician can lay down a broad general outline of such matters, but the details — the little things that matter so much — must of necessity be often left to the nurse; and how shall she supply all this without intelligence and a proper education in her profession. In hospitals the doctors may be temporarily off duty, the nurse is always in charge. Her candle goeth not out by night, and it is to her watchfulness and intelligent care that the patients are in the main committed through the night. She must be taught how much and how little she can do and when it is necessary to call in further aid.

But the training of a nurse in a hospital does not deal merely with book-learning or with clinical methods. It carries with it the building up of character. The nurse is taught that the most scrupulous honesty is necessary in all her work, that any omission, whether it come about wilfully or through ignorance, may be productive of the

most serious results; that one step in aseptic technique omitted or slurred over may be paid for by the life of the patient committed to her charge. May we not then regard the training school of a hospital as a place not only for preparing women to undertake properly the care of the sick, but also where properly selected women are given such moral and educational advantages that they may go forth equipped to aid in the practical solution of some of the various social problems which can be solved only by the help of intelligent womanly work. She is limited only by her limitations, for as she shows her ability to fill them, other fields of usefulness are being opened up to her.

A further progress or evolution from hospital, private nursing, and district nursing dates from four years ago, when two trained nurses in New York City formed a nurses' settlement in one of the most densely populated tenement districts. From rooms in a tenement house the headquarters have been removed to a good-sized private dwelling, in which eight nurses now make their home. At present there are three such settlements in New York, which do an infinite variety of work, besides attending upon the sick. The members of these settlements have become a power for good among much misery. Their opportunities for the acquirement of practical knowledge concerning the problems connected with the poor in all great cities has lately been recognized by the election of one of their number as a member of the Sanitary Health Association of New York City, while in London a trained nurse has just been appointed on the London school board. In the same city a nurse is regularly employed by the Corporation to teach practical hygiene in the poor districts.

Another movement of interest is that which aims at the introduction of trained nurses in families of only moderate means. In some cities associations have been formed to provide a nurse who attends for one or more hours a day for a moderate fee, and who sees that such arrangements are made that the patient is taken proper

care of. Thus it will be seen that in many ways the profession is broadening out and the graduate members are practically taking their part in aiding in the propagation and advancement of preventive medicine.

Within the profession itself, also, we are not standing still, but are ever aiming at improvements upon older methods. We have now an organized association of superintendents of training schools, who, at the expenditure of not a little time, energy, and money, are doing much to bring about some degree of uniformity among the different schools. Their aim is to establish, as far as possible, uniform standards as regards requirements for entrance, the curriculum, and the granting of certificates. The best schools are beginning to increase the time of training from two to three years and are thus improving the quality of the graduate nurse. If they have lessened the quantity by these means they have done no harm. This distinct effort to put training schools upon a higher educational basis has also been furthered by those schools which have at the same time introduced the non-payment system, and which, while asking the nurse to forego a present remuneration, have guaranteed to her in return for her work a thorough education as well as a practical training. Under these circumstances it was only just that more time for study, lectures, and demonstrations should be given to the pupil nurse, and that all her energies should not be exhausted in the routine work of the wards, which should now occupy her for only eight hours out of the twenty-four. While some schools have extended their course to three years, and others have adopted the non-payment system, it is to be regretted that at present in only one or two hospitals have the hours of daily practical work been reduced to eight, the average time required still being usually from ten to eleven hours.

As a nurse who has watched all these changes with keen interest, I take peculiar pleasure in assisting at the opening of the Lakeside Hospital, because it is the first hospital on record supported by private contributions that opens its school for nurses upon a purely educational

basis. The women are to be congratulated who enter this training school as pupil nurses. The fact that the trustees of the hospital in its construction and sanitary arrangements have given every thought for the care and the well-being of the patients augurs well for the fulfilment of the obligations which they have taken upon themselves in accepting pupils in their training school. Honor and credit are due to their broad-minded and far-seeing policy, which insists that patients can be properly taken care of only by intelligent and well-trained nurses. This school offers to its pupils a three years' course of instruction, with eight hours' practical work in the wards. The pupils receive no payment, but are furnished a thorough, systematic, practical, and theoretical education in return for their work. As a result, the women who enter as pupils will be those who come seeking knowledge and who have high ideals. The commercially minded woman who looks only to the dollars and cents can have no place here. Fortunate, indeed, are those whose privilege it is to study nursing at this time and to become a part of the working force of such a hospital. Of friends she finds plenty, of enemies few. She cannot well be classed with the "new woman," for her art is ancient history and extends through the ages. We read of fair ladies nursing their stricken knights, of Elaine tending the wounded Launcelot, or of the Good Samaritan binding up wounds, pouring in oil and wine. Nor do we lack the Master's reply to the question, "When saw we thee sick or in prison, and ministered unto thee?" "Even as ye did it unto the least of one of these my brethren." The woman in this profession needs no pity bestowed upon her; her days are all rounded out in absorbing work and interest, and so are happy ones. It is exceedingly interesting to visit old St. Bartholomew's hospital in London. Over five hundred years have passed since its doors were first opened to the sick. Its history is most impressive, and as one follows it step by step through its buildings one realizes as never before that such a hospital is not only for to-day and to-morrow, or for our own short lives, but

that its life and influence will extend far into the future and will bear with it the lives of its men and women bound up with it.

To the building up a fabric of personal education and personal character; to the preparation for boundless opportunities for good work in the world, to happy, useful lives, and to the welfare of future generations are the women dedicated who become part of this new Hospital and Training School, the inception of which we are here to witness. As an older member in this profession of nursing, I rejoice in its high standing and the opportunities offered to its nurses, and as the representative of the Associated Trained Nurses in the United States and Canada I bid it welcome and God-speed.

INTUSSUSCEPTION.*

BY SAMUEL W. KELLEY, M. D.,

Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons, Pediatricist to Cleveland General Hospital, etc.

When your committeeman spoke to me about coming before you he said there would probably be another paper upon some intestinal disorder in children, and it might be a good plan to give something in the same line. I thought of intussusception, and told him I would do something on that. Perhaps it might interest you to hear some observations, made mostly in 1892-93, the details of which would require a good many hours of your valuable time, but the results of which I can give you in a very few minutes. Intussusception is a big subject for a twenty minute talk, and I will confine myself to certain phases of treatment, after running over other portions of the subject to freshen it in our minds.

You are well aware that of all forms of obstruction of the bowels in children this is the most common; yet, not frequently met, it is just rare enough to be easily overlooked. It occurs in both sexes, males more frequently for unknown reasons. Three-eighths of all cases

*Delivered before the Cleveland Medical Society, Feb. 11, 1898.

of obstruction of the intestine are intussusceptions. Fifty per cent. of these are under twelve years of age, and 25 per cent. occur in the first twelve months. These are Treves' statistics. According to another writer, of all cases under ten years, three-fourths are under two years, and one-half between four and nine months. Around the age of five or six months is a very favorable time for intussusception.

The causes alleged are many. They vary all the way from diarrhea to constipation. The most constant cause, and one that is admitted on all sides, is irregularity and great activity of the peristaltic movements. Occasional causes are polypus, malformations, and limited paralyses. The long and loose mesenteric attachment normal in infancy favors obstructions.

The classification of intussusception "without symptoms," only found *post mortem*, always seemed to me a senseless one; no more to be classed with intussusception than rigor mortis is with the rigors of malaria.

Invaginations are single or multiple, upward or downward, mostly downward. They are enteric when in the small intestine, colic in the large intestine, ileo-colic when the ileum slips through the valve into the colon, and ileo-cecal when the valve leads the way, the bowel telescoping at the expense of the large intestine. According to Mr. Treves again, 70 per cent. of all cases in babies are this variety—ileo-cecal.

According to the severity, intussusceptions are acute, subacute, chronic, or ultra-acute. Symptoms: pain, vomiting, collapse, hemorrhage, subnormal temperature at first, fever toward death. Tumor may be obvious, even protruding from the anus, or may be found on close searching under chloroform.

You are also familiar with the progress and termination. When the arterial and venous circulation are both cut off gangrene soon supervenes. When it is not so tight and only the venous circulation is cut off there is an intense swelling of the intussusceptum, or strangulated portion, increasing from hour to hour or from day to day.

Adhesions between the peritoneal layers may form in 48 hours, or possibly not for weeks.

There is a possibility of spontaneous reduction. I have seen this, I think. Of course it can not be proven, but there are cases which can not be accounted for in any other way. It is not to be counted upon. There are cases of sloughing out of the portion ensheathed, with recovery, the adhesions forming an end to end anastomosis by natural processes alone. These are curiosities and are not to be expected. The usual result is death, which may come within 24 hours with shock, in two or three days, in five or seven days; I would say within five to six days in the great majority of cases. Some will go on for weeks and some for months. Those cases in which the bowel sloughs out may not ultimately recover. They linger along, but finally die from exhaustion or some obstruction later on.

Treatment. The only drug that is worth mentioning is opium, and opium is better than any of its derivatives. It quiets pain and peristalsis and relieves shock. Heat and stimulants also relieve shock. But opium is only palliative in most cases; it may act as a curative; the peristalsis being removed, the bowel brought to quietude or nearly so, sometimes spontaneous reduction might take place. Often the relief given by opium is deceptive. The pain being quieted—the characteristic paroxysmal pain being quieted—the peristalsis or tenesmus being overcome to a degree, one is apt to think that it was not an intussusception after all; but after a few hours of quiet one awakes to the fact that the same old trouble is there. It is very misleading. One should not be deceived by opium in this way, but should proceed at once to methods of reduction.

One of the older ways was with mercury. They used to give mercury for almost everything. Mercury by the mouth; or by pouring it into the other end of the canal in large quantities, inverting the child so the mercury would act by its own weight. These methods are obsolete and are mentioned merely as relics.

Occasional cases have been reduced with bougies of various kinds; pushing up the bowel from below; by sheep's gut introduced and then inflated, something as one would use a Barnes' bag, pushing it up. But these various devices have never been much advised nor often resorted to.

The only reliable ways as now taught are by inflation, or by hydrostatic pressure; unless we resort to abdominal section (or consider that there is some merit in electricity). The method of inflation may be by gases; carbon dioxid, or hydrogen after Senn's method, or more frequently common air; the patient under chloroform either horizontal on the back, or what is better, with the head lowered for the sake of gravity. The instruments for inflation are a catheter, or some similar tube, and a hand bellows. While the air is pumped in, the abdomen is manipulated.

In the method by hydrostatic pressure one needs several yards of rubber tubing and a nozzle with a shoulder or collar to prevent leakage — which, however, will occur. Different fluids have been used for the injection; gruel, milk, plain water, or saline solution — ordinary salt solution — about a dram to the quart; again, under chloroform and the same position of the patient, head down, buttocks up, holding the water in, and regulating the pressure by the elevation of the fountain. Inflation and, for aught I know, injections are as old as Hippocrates. But it seems that the method by hydrostatic pressure was really first systematized by W. E. Forest in 1876, and was reported in the *American Journal of Obstetrics*. According to Forest, eight or nine pounds' pressure to the square inch is borne by the infant's intestine. Upon the scale that an elevation of two and one-half feet corresponds to one pound to the square inch pressure, he put the fountain up to twenty feet or more if necessary, giving a pressure of eight or nine pounds to the square inch.

Now, not to be too long about it, you see this quoted in all the text-books, everywhere referring back to Forest's work, and very little advance made upon the subject

since. In his work and that of those who have followed him, it appeared to me, when I studied the subject, that the element of time had not been given the prominence it deserves. My observations, both experimental and clinical, have convinced me that the factor of time during which the pressure is maintained is as important as the degree of pressure in reducing an invagination. Although you will see, for instance in Keen's article in Keating's *Cyclopedia*, that he recommends five or six pounds pressure, saying twelve or fifteen pounds are too much — that Forest had not sufficiently taken into consideration the softened state of the intestine — nothing is said about the time that pressure is to be employed; and so with the text-books. If you will note reports of cases in the journals, they are not only silent on the question of time that the pressure is to be kept up, but too many of them are also silent on the amount of the pressure. In many cases they will say: "We used injections" or "inflations" or "we used injections persistently" or "we inflated the bowel repeatedly," or such expressions as these without measuring accurately the amount of pressure, and very seldom if ever saying anything about the time the pressure was maintained. I do not remember seeing anything definite in these reports of cases giving sufficient prominence to this factor.

It is one thing to reduce an intussusception, and another thing to have done it safely. Although you may not have ruptured the gut you may have ruptured the peritoneal coat, or you may have paralyzed the gut by over-stretching; and sometimes after you have reduced it you get peritonitis or paralysis, which could have been avoided by a lower pressure for a longer time. I do not know that I am prepared to give at present precise figures, but I think that I am not far wrong in saying that a pressure of 3 to 5 pounds for 25 or 30 minutes or longer is more efficient and safer than a pressure of 7 or 9 pounds for 5 or 10 minutes.

Now this holds true with pressure with any material used. As to the use of air I want to say something. Mr.

Clement Lucas will stand for one of a class who have advocated the use of air in preference to water as being less liable to rupture the gut. Jacobi prefers air, if I remember, as do many others, for instance Holt. But even Holt, who is one of the best and ablest of recent writers, says nothing about measuring the pressure of the air when he inflates with air. He says that the quantity of air injected must be left to the judgment of the physician, and that the best guide is the tension of the abdominal walls. This is very fallacious, very uncertain, it seems to me. There is another advantage in the use of air, and one of Holt's reasons for preferring it is that it is more easy to tell with air than water when you have reduced the intussusception. After the bowel begins to swell up with water you lose the tumor, and are not able to follow it; and after continuing your pressure for a while, running it up as high as you dare, you are still not certain whether it has been reduced or not. You may, after relaxing your pressure, and after you have let the child come out from the chloroform, and the water has drained off, find there is the same old tumor back again. With the air you feel more readily the giving way of the tumor. The air moves up more quickly, and you feel it is reduced. This is one advantage in the use of air. Besides this, I am quite certain that air will go where water will not—not very well, at least,—namely, above the ileocecal valve. Forest succeeded in causing the carbon dioxide gas to go above the valve more readily than water; air will go much more readily. In case the intussusception is above the valve, there is this advantage of air over water.

So far there has never been any way of easily and practically measuring the pressure of air. One does not have air chambers with gauges always at hand, and there should be an easy way, for, as I said, guessing is very fallacious. This difficulty I have obviated in a very simple way by using the air first, filling the gut and raising the pressure very moderately, then introducing water after the air. The water pressure is very readily measured by the elevation of the fountain, and this following the air, you presume

that the air pressure is equal to the water pressure. You can gauge it in this way very easily.

Among these fluids which have been used, saline solutions have some advantage. They are less irritating than plain water. If used hot, 100 to 105 degrees, they also tend to overcome shock, and there is a possibility of absorption to make up for some of the hemorrhage which has taken place before you began your treatment. Not only that, but there is an advantage not usually considered in saline solutions if you make use of electricity. But a little more about electricity later on.

Some one of these methods should be used as soon as the intussusception is found—should be used within a few hours, and if one does not succeed the first time, in acute cases it should be repeated in two or three hours. If that does not prove successful, immediate resort should be made to abdominal section. In the less acute cases, with the bowel not so tightly pinched, judged by the amount of straining, size of tumor, amount of collapse, it is safe to wait a day or two or three before resorting to abdominal section. I hope at some future time to offer some observations on abdominal section for intussusception.

If you will allow me to recapitulate, I would like first to remind you of this trouble, because most cases I have seen are cases that have been overlooked; very apt from its being rather infrequent to be mistaken for ileocolitis or for gastro-enteritis. I think children die of it without a diagnosis being made, because most of the cases I have seen were thought to be something else in the beginning; "summer complaint," "dysentery," or "prolapse of the rectum."

Then again, I would like to urge that greater care and accuracy be employed in the use of proper means for reduction of intussusceptions; and that greater accuracy be employed in the report of cases; measuring the amount of pressure and the time during which the pressure is maintained. I claim that the element of time is almost if not quite as important as the degree of the pressure.

Air pressure has some advantages over hydrostatic pressure in the enteric variety. Air pressure can be and should be accurately measured by water pressure behind it. Saline solution has some advantage over plain water besides that usually given (that it is less irritating), its particular advantage being in the use of electricity. I do not believe that electricity has received sufficient attention as a means of reducing intussusception. Although it has been used to some extent, it is not even mentioned in the standard text-books. I wish to direct attention to a plan for reducing intussusception which I believe has never been mentioned before; that of causing it to withdraw by producing contraction with the galvanic current after the tumor has been lessened in size by hydrostatic pressure, the electricity being applied while the water pressure is still on. One pole (and it seems to make little difference which) is applied in the saline solution in the rectum, and the other outside the abdominal wall over the intestines above the tumor. Or the second pole is applied in the stomach, a saline solution having been first introduced.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

NOT A VIRTUE BUT A VICE.

How common it is to hear a physician argue the philanthropy of his profession by citing the amount of work done for which no compensation is received. He will tell you how many hundreds of dollars' worth of accounts he has standing on his books for which he will never receive a cent. He reasons that, therefore, he has done a great deal of good — of charity work in his community, and that he is a very praiseworthy and philanthropic individual. As to whether this latter is true depends on two points: First, in what spirit the work was done, and secondly, for whom it was done. A little introspective study of motive will convince any candid physician that by far the greater part of that unpaid

work was done in the hope and expectation that it would be paid for, and it is only relegated to the list of the gratuitous when it is found to be uncollectible and there is no help for it. Only a comparatively small percentage of that unpaid work was done willingly and intentionally as a free gift. We are reminded of the story of the bumpkin in church who accidentally dropped a crown piece instead of a shilling into the contribution box. He wanted to take back the crown piece, but the deacon refused, saying what was once given could not be returned. "Never mind, then," said the unwilling donor, "I'll get credit for the crown piece in heaven." "No you'll not," said the deacon. "You'll only get credit for the shilling you *meant* to give."

We are inclined to accord the doctor credit only for what he gives *intentionally*; further, we insist that his charity should be bestowed only upon worthy people. You remember what Dr. Cathell says in this connection: "But even in doing charity you must discriminate. There seem to be three classes of poor, the Lord's poor, the devil's poor, and the poor devils. The first and last are worthy objects of every physician's attention, and you should lose no opportunity to give relief to their distress. The less you have to do with the other class, *the devil's poor*, the better for you, but you will be compelled to attend to more than you choose of the lowest and meanest of these, some for God's sake, and some on account of their relationship to better patients."

Now, we have no fault to find with the doctor when he attends gratuitously the class called "the Lord's poor," that is, the worthy and virtuous poor, or "the poor devils," the weak and the helpless poor; when he wastes his strength on "the devil's poor"—the persistently and wilfully reckless and vicious,—the charity is very doubtfully bestowed. But we protest emphatically against the bestowal of medical services gratuitously upon people "on account of their relationship to better patients." There are entirely too many "better patients" in moderate or even in affluent circumstances who are

disposed to be very kind and thoughtful, and patronizing and charitable to their poor relations, or even poor neighbors, *at the doctor's expense*. Some of them will take all manner of credit to themselves for finding a charity case and calling you in, and then with mutual introductions and recommendations and felicitations, they retire from the scene and leave you to carry the burden alone and unrewarded. In every case of this kind the doctor should decline to serve gratuitously. Why should the physician be expected to do more for people than their own relations or would-be-lordly patrons will do for them? If these latter want some charity done, let them reach in their own pockets and pay the doctor, or at least share the burden with him.

But by far the greatest part of the doctor's unpaid accounts are against a different class from any yet mentioned, viz., the habitual delinquents or "dead beats." These may be poor, and if so they are the poorest kind of "devil's poor;" but in many instances they are as well able to pay the doctor as are any of their neighbors who do pay. Oftentimes they are better able to pay a bill than the doctor is to lose it, and they frequently indulge in more luxuries in their style of living than the hardworking physician whom they defraud. The genus is too well known to need further description. There are several species equally familiar and equally aggravating which we shall not pause to denounce. Their names are upon the books of nearly every practising physician in the land, or perhaps in the world, and it is *no credit to the profession that this is true*. To attend these people for anything but cash fees is to permit fraud and to encourage others to similar dishonesty. The physician who carelessly allows such practices to continue condones the evil. Time may have been when the physician was morally bound to answer all calls upon his professional skill without question as to pay. But in these days of shameless imposture and abuse of charity, it is his duty to ascertain who it is and under what circumstances he is to serve. To bestow service gratuitously — whether the

gratuity is intentional or elicited by fraud—upon those who “could pay but do not” is *not a virtue but a vice*.

Periscope.

AN IMPORTANT DISCOVERY IN THE BIOLOGY OF THE HEMATOZOA.

It is a pleasure to note that an American investigator, working in an American laboratory, has made a series of observations upon the sexual phenomena of certain hematozoa, which promise to mark an epoch in the study of these organisms quite as far-reaching as Golgi's demonstration of the developmental phases of the malarial parasite. It is also a noteworthy feature that these brilliant studies were made upon one of the lower animals (the common American crow), since this forcibly illustrates the great value of comparative pathological and experimental methods in throwing light upon problems of human pathology.

MacCallum, working in the clinical laboratory of Johns Hopkins Hospital upon a certain species of hematozoa infecting birds and corresponding very closely to the parasite of malaria in human blood, has, by acute observation and logical induction, been able to demonstrate what seems to be a *sexual differentiation* in these lowly animal organisms, and, further, to trace the steps of a process which can only be interpreted as equivalent to *spermatogenesis* and *fertilisation* in general biology.

The results of a long-continued study of the hematozoa in birds are set forth in the current number of the *Journal of Experimental Medicine* (Vol. III., No. 1, 1898), by MacCallum and his co-worker, Opie, in several papers which contain much valuable information on the pathology of avian malaria. The particular observations to which reference is made are contained in MacCallum's paper “On the Hematozoan Infections of Birds” (*loc. cit.*, pp. 117–136), where a graphic and intensely interesting account is given. Without going into the details it may be said that two forms of intra-corpuscular parasites were noticed—a quiescent granular body, and a hyaline form. The hyaline form was found to produce flagella, while the granular form never did, after these bodies had escaped from the enclosing red blood corpuscles. After a

short time the flagella were cast off from the hyaline body, which degenerated. The flagella, swimming about in the blood plasma, approached a quiescent granular form, and, after a varying interval, *one of these minute motile bodies forced its way into the interior of the granular sphere*, which, after a period of rest, took on the form of a free-swimming worm-like organism.

One is irresistibly forced to conclude with the author that the hyaline body is the male and the granular body the female element of this species; that flagellation is, in reality, spermatogenesis; that the free flagella are spermatozoa; and that the final act is one of fertilization. When it is remembered that the flagellate forms of the malarial parasite have been under keen observation for more than a decade, and that the process of flagellation and even the free flagella have been repeatedly seen in the estivo-autumnal type of malarial organism, it seems strange that the interpretation of the process should have been so long delayed.

The phenomena described by MacCallum have been repeatedly verified by himself, and by other workers in Johns Hopkins Hospital, including Welch, Thayer, and Barker. Moreover, essentially the same process has been found in the blood of a woman infected with the estivo-autumnal type of malarial organism.

SUDDEN DEATH WITH PERSISTENT THYMUS, LYMPHATIC HYPERPLASIA, AND VASCULAR HYPOPLASIA.

As recent contributions to this subject, which has not received, in America, the attention merited by its importance, may be mentioned the excellent papers by Ewing, "The Lymphatic Constitution and Its Relation to Some Forms of Sudden Death" (*New York Medical Journal*, July 10, 1897), and by Rupert Norton, "The Thymus Gland and Its Relation to Sudden Death in Children" (*Philadelphia Medical Journal*, Feb. 5, 1898). A five-year-old girl, dying suddenly during chloroform narcosis, was examined *post mortem* by Ewing, and he found the typical anatomical picture of the *constitutio lymphatica* in the form of an enlarged thymus, marked hyperplasia of the splenic and intestinal lymph follicles, but with no marked narrowing of the arteries. This, we believe, is the first original case of its kind reported in American medical literature. Norton does not record any personal observations, but discusses the subject of thymic asthma and sudden death

in a most interesting manner, giving us a valuable résumé of the subject.

The topic discussed in these papers is one of weighty significance alike to clinicians, pathologists, and medical jurists. The peculiar morbid anatomy in which such lymph-adenoid structures as the thymus, spleen, and intestinal lymph nodes participate, in which the arteries are often narrowed, and in which the osseous changes of rickets sometimes are added, is sufficiently striking to be discovered by careful post-mortem examination. The subjects of this morbid condition often furnish some of the most tragic instances of sudden death—so that, in all cases of unexpected and inexplicable death, it is desirable to have this possibility in mind. This would apply with especial force to surgeons, for the victims of this malady, whatever its nature may be, are especially likely to expire suddenly in anesthesia, or during the performance of a surgical operation, often trivial in itself—a possibility which the surgeon should have clearly in mind for purposes of self-protection. Again, it is not improbable that some of the sudden deaths following the injection of diphtheria antitoxin may have been due to this same cause, as has recently been pointed out by Escherich in the case of Professor Langerhans' child, in Berlin, who died immediately after an antitoxin injection.

The admirable discussion of this subject in the papers by Ewing and Norton should entitle them to careful reading.

OHLMACHER.

New Books.

HANDBOOK OF MATERIA MEDICA, PHARMACY, AND THERAPEUTICS. By Samuel O. L. Potter, A. M., M. D., M. R. C. P. Lond. 6th edition. P. Blakiston, Son & Co., Philadelphia.

This is an excellent résumé of the importance of the physiologic action of drugs on the normal organism of the lower animal and man. The definitions might in some cases be improved upon; thus glucosides need not necessarily produce glucose; they may produce another sugar of the hexose (monosaccharin) group, and again some do not produce any sugar whatever. There are some good points on the administration of medicines.

Classifications are of course difficult; it would seem preferable, therefore, the simpler the classification, if suffi-

ciently explanatory; thus it is necessary to classify drugs as cerebral excitants, deliriants, depressants, when generally they are the effects of the same drug under different conditions of dosage, etc. Under the respiratory stimulants hydrocyanic acid is omitted, although it is the peer of all drugs in such effect. Under hepatic stimulants a whole list of drugs are given which are said to increase the flow of bile, when in reality no positive experimental proof is at hand to corroborate this statement, since, up to date, bile or bile salts alone seem to act thus. Under the alkalizers of urine the important part played by a vegetable diet is not mentioned, although fruits, milk, and fish are cited.

Among the antidotes for hydrocyanic acid, ferrous sulphate is given when it is known to be worthless. Along with cobaltous nitrate, sodium thiosulphate might be included. The discoverer of cobaltous nitrate for this purpose was Johann Antal, not Johann.

The article on animal extracts is good. Unfortunately Jacoby's excellent article on ergot is not incorporated in the work, and the same confusion and misstatements continue as of old on this important drug. The physiologic action included in the description of each drug is extensive and excellent.

The part on incompatibles and pharmacy is proper, and the therapeutic division very useful. Under the head of poisons and their antidotes are many excellent points, still the idea of continuous or intermittent washing out of the stomach in the case of soluble poisons is not dilated upon. A comprehensive thumb and general index completes a meritorious publication, which the teacher, student, and busy general practitioner will find a profitable investment.

SPENZER.

MANUAL OF STATIC ELECTRICITY IN X-RAY AND THERAPEUTIC USES. By S. H. Monell, M. D., founder and chief instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine; etc., etc. Illustrated. New York, William Beverley Harison, 3 and 5 W. 18th St. 1897.

Twenty-five hundred years ago, when Thales recorded the observation that a piece of amber rubbed with silk possessed the property of attracting to itself light particles of matter, he little thought that in his hand lay the key to wonderful secrets of a future civilization. When,

twenty-two hundred years later, Dr. Gilbert, physician to Queen Elizabeth, gave to the mysterious force the name which it yet bears, from the *ἡλεκτρον* of which it was originally supposed to be an inherent property, the advance in knowledge of the force had been but of the slightest. In the eighteenth century previous knowledge was reinforced by discovery of the spark and the possibility of a shock, especially with use of a Leyden jar, and the friction machine was devised. At the middle of the century a connection between electricity and atmospheric phenomena was discovered — a notable epoch in the progress of our knowledge.

But even before this epoch in advancement, therapeutics had seized upon the new agency for its own ends, and in the eighteenth century almost every disease for which the static force is now used had been successfully treated by use of the friction machine. Dr. Monell fully recognizes this fact, saying that "static electricity is new to-day only in the sense that the multiplication table is new to every boy who learns about it for the first time." Yet its value has not always been recognized. A compilation of opinions, which Dr. Monell gives with liberal quotations, shows the utmost diversity, which he meets by showing that a number of writers quoted in adverse opinion afterwards underwent a change in their convictions; others wrote without practical experience, and others worked with inadequate apparatus. He attributes the lack of development, or indeed retrogression, in static therapeutics, during the long period from its original development down to a recent date, to the imperfect type of machine used and to the difficulty in keeping it in effective working order during unfavorable atmospheric conditions, especially in the humid climate of England, where much of the experimenting was done. On the other hand, with one of the modern Holtz machines, having large multiple plates, and thoroughly protected from humidity, magnificent results can be attained.

Beginning the practical portion of the treatise with a chapter of minute directions for the care of the Holtz machine, he goes on to general therapeutic methods and, later, their application in a great variety of diseases and abnormal conditions. It would be impossible here to enumerate these, but it might be said that they are by no means limited to conditions where the nervous system is directly implicated, but include many cases of general or local defective nutrition. In some conditions extreme-

ly obstinate to medicinal treatment, as chronic and painful rheumatic affections, neuralgias, and neuritis, remarkable success attends the use of static electricity. Dr. Monell's own opinion is corroborated by reports of cases from numerous other sources.

The most attractive chapter for many will be that on the production of X rays by use of the static machine. Dr. Monell advocates very forcibly this method of producing the rays, claiming that it is less noisy and produces less strain on the tubes, and that danger of X-ray burns is eliminated, and that, withal, effects may be obtained equal or superior to those secured with any coil apparatus. In order to use the machine effectively, the operator must have adequate ability to handle the machine and the tubes, and the chapters on this subject contain much valuable information and many practical points.

The latter pages of the book are given over to a very full historical review of static electricity in therapeutics during a century and a half. The names of John Wesley, Benjamin Franklin, T. Cavallo, Miles Partington, Anthony Fothergill, and others are found among the pioneers in the 18th century. From the early 19th century are the celebrated Guy's Hospital reports made by Addison, Golding Bird, and Gull, very fully quoted.

Dr. Monell's book is itself a pioneer in its field and will be a welcome accession to the library of every physician who uses or expects to use a static machine, and to every one, as well, who wishes to know the position which the static force occupies in modern medicine.

F. K. S.

THE PRINCIPLES OF BACTERIOLOGY. A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania, Philadelphia. Fourth edition, enlarged and thoroughly revised. 12mo., 542 pages, 106 illustrations, 19 colored. Cloth, \$2.75. Philadelphia and New York, Lea Brothers & Co.

Abbott's text-book has enjoyed a well-merited popularity. It presents the fundamental points in elementary bacteriology in a way that makes the book useful alike to the physician and to the student working in the laboratory. The incorporation of practical exercises is a feature of unquestionable value.

A great deal of new information developed by the rapid progress of this branch of biology has been withheld, largely, no doubt, by the author's design to keep

the size of the book within bounds. Still, it cannot be said that these omissions detract from the usefulness of this little manual as an introduction to the study of bacteriology in its relation to human pathology. A nice discrimination is necessary in the preparation of a small volume devoted to the discussion of a large subject, and Abbott seems to have exercised this discrimination very judiciously.

OHLMACHER.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Being a yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-Books, of the leading American and Foreign Authors and Investigators. Collected and arranged with Critical Editorial comments, by Eminent American Specialists and Teachers under the General Editorial charge of George M. Gould, M. D. Illustrated. Philadelphia, W. B. Saunders, 925 Walnut St. 1898. In one imperial octavo volume of about 1200 pages. Prices, cloth, \$6.50 net; half morocco, \$7.50 net. Agent for Cleveland and vicinity, Galbraith, New England Building.

It is not to be inferred from the name "American Year-Book" that only American medical literature has been collated. The whole world has been laid under tribute for this comprehensive work. We have before now published the list of contributors, names well known in the medical world in their respective special lines of labor. The list remains the same as last year, with the exception that Professor Leffman has resigned. The subjects before edited by him were divided into three departments, viz.: Physiologic Chemistry is presented by Prof. John J. Abel, of Johns Hopkins Hospital; Public Hygiene and Preventive Medicine, by Dr. Samuel W. Abbott, Secretary of the Massachusetts State Board of Health, and Legal Medicine, by Dr. Wyatt Johnston, of Montreal, Canada. The departments covered by the Year-Book are General Medicine, General Surgery, Obstetrics, Gynecology, Pathology, Pediatrics, Nervous and Mental Diseases, Orthopedic Surgery, Ophthalmology, Otology, Diseases of the Nose and Larynx, Dermatology and Syphilis, Materia Medica, Experimental Therapeutics and Pharmacology, Anatomy, Physiology, Medical Jurisprudence, Hygiene, and Clinical Chemistry. Comparison of the work in the various departments would be invidious; suffice it to say that the reader will find that nothing of importance among the new medical truths or suggestions of the year has been omitted. And he will

find that the material from the various journals and treatises has not been jumbled together as a mass of extracts, but well selected, digested, condensed, and arranged. The critical reviews of the year's work by the various editors of departments form a feature especially valuable. A few hours' reading of these reviews gives one a conspectus of the year's progress. The various contributors seem to have "gotten down to their work" better this year than ever before.

The one-volume annual is the kind of yearly summary that has come to stay. The talented editor of *The Year-Book*, with generous backing from a liberal publisher, and able aid from his corps of collaborators, has evolved the ideal annual for the practitioner. It will probably meet the approval and *continued* patronage of a larger percentage of the physicians, of this country at least, than any work of its class yet presented.

THE DOCTOR'S WINDOW. POEMS BY THE DOCTOR, FOR THE DOCTOR AND ABOUT THE DOCTOR. Edited by Ina Russelle Warren, with an introduction by William Pepper, M. D., LL. D. Buffalo, New York, Charles Wells Moulton, Eighteen-Hundred-Ninety-Eight. Price, \$2.50.

The title is appropriate, the binding attractive. The book is beautifully gotten up, with laid paper, deckel edges and gilt top. The title-page makes no boast of illustrations, yet there are a number of full-page photogravures of famous paintings, and in like manner the body of the work will be found even better than it promises to be. The introduction is, to speak the truth, rather disappointing. The writer does not seem to have caught the spirit of his theme nor to have appreciated that the opportunity was well worthy of the ablest pen. For here are gems from Dr. John Armstrong and Edward Jenner, from John Stuart Blackie and Byron and Will Carleton; from Austin Dobson and Wm. Henry Drummond; from Eugene Field and Oliver Wendell Holmes, Ben Jonson, and J. G. Saxe; from S. Weir Mitchell, J. Whitcomb Riley, Chas. Wesley, and Whittier and Walt Whitman; from more than a hundred poets in and out of the profession. In fact, nearly every poem of any note by the doctor, for the doctor and about the doctor—from old Geoffrey Chaucer's "Doctor of Phisike," the oldest poetic description of a physician in modern English literature, down to the most recent bright and witty, appreciative or cynical productions of the poets of our own day, is to be found here. Not that all

medical rhymes that one has seen in newspapers, in journals, or even in books are reproduced here. The selections have been judiciously made. They comprise about a hundred and forty poems, covering nearly 300 delightful and refreshing pages. Such books do much to improve the literary taste and training of the profession. We venture to predict that "The Doctor's Window" will be very much looked into for the embellishment of essays and addresses, toasts and responses, and other literary and oratorical efforts indulged in by physicians. This book should and doubtless will find its way into the office and into the home of nearly every doctor in English speaking countries, and will bring hours of rare enjoyment to any cultivated reader.

ELEMENTS OF LATIN. FOR STUDENTS OF MEDICINE AND PHARMACY. By George D. Crothers, A. M., M. D., Teacher of Latin and Greek in the St. Joseph (Mo.) High School; formerly Professor of Latin and Greek in the University of Omaha; and Hiram H. Bice, A. M., Instructor in Latin and Greek in the Boys' High School of New York City. 5¼ x 7½ inches. Pages VII-242. Flexible cloth, \$1.25 net. The F. A. Davis Co., Philadelphia; New York; Chicago.

This book will prove useful not only to such students as have never had an opportunity to acquire a knowledge of Latin, but to all who wish to apply the principles of Latin etymology and construction to an intelligent use of the terminology of medicine and pharmacy. Following the grammatical portion of the work and the exercises thereon, there is an extended list of anatomical proper names and their origin, and also a general vocabulary.

THE SURGICAL TREATMENT OF ANO-RECTAL IMPERFORATION, IN THE LIGHT OF MODERN OPERATIVE PROCEDURES. By Rudolph Matas, M. D., Professor of Surgery, Medical Department of Tulane University; Visiting Surgeon to the Charity Hospital of New Orleans, etc. From the Transactions of the American Surgical Association. 1897.

After rehearsing the varieties of this deformity, the author discusses at length Stromeier's suggestion, Kraske's operation and its modifications; the combined perineo-sacro-abdominal operations, etc., and gives two tables showing the results of coccygeotomy and the sacral operation for imperforation.

He also gives his personal experience with Kraske's operation. He favors the perineal route for relieving im-

perforation. He does not place reliance in any external sign for determining the exact internal anatomical condition, nor place dependence upon the use of probes or guides introduced into bladder or vagina, and deprecates the use of the exploring needle. He urges early operation, and (with the perineo-sacral operation) has good hopes of ultimate perfect functional control, where proctoplasty is performed according to Amussat's rules. He advises median incisions, in order to avoid injury to sphincter and levator fibres, and if these muscles are absent, resort to axial rotation of the bowel. He considers intraperitoneal exploration of the pelvis through a perineo-sacral opening as suggested by Stromeyer a legitimate procedure. The suggestions made to amplify the primary perineal incision by the removal of the coccyx, excision of the sacrum, by arteoplastic sacral flaps, and by parasacral incisions, are valuable procedures where necessity demands, always sacrificing as little bone as possible. Primary exploratory laparotomies are not indicated as a rule. Where the colon cannot be found, or in an emergency, it is justifiable to attach the small bowel to the perineo-sacral wound, in which case abdominal incision to identify the bowel may be resorted to. Inguinal colotomy gives a greater mortality than the perineal or perineo-sacral operation, and should not be resorted to unless the infant is seen in an exhausted condition at a late hour. These are some of the principal ideas set forth, and together with the bibliographic notes and references comprise a valuable monograph which will well repay perusal.

THE RUBĀIYĀT OF DOC SIFERS. By James Whitcomb Riley. Illustrated by C. M. Relyea. New York. The Century Company. 1897.

It was an odd conceit of the author's to couple the name of a classic of ancient Persia with that of a country doctor of Hoosierdom. To harness them in dialect and make them keep step together is a quaint performance. Riley's rhyming might be called unfair in that he takes advantage of dialect or good English as is most convenient; but the same was said of Burns. Some readers do not like dialect, however fashionable. Yet remember how, recently, the reading world grew enthusiastic over the touching faithfulness of a country doctor, although the tale abounded in unpronounceable Scotch brogue. Do not be deterred by the dialect. Doc. Sifers is as lovable

a character as MacLure, and the dialect of the Rubàiyàt is comprehensible to the English reader.

The illustrations are exquisite. The Rubàiyàt says:

"They's no describin' Sifers,—fer when all is said and done,
He's jes *hissef*, *Doc Sifers*—ner they haint no other one!"

But we think differently. There are many of him. The type is not infrequently met. In many and many a community some reader of this Rubàiyàt might say,—

His name haint Sifers. Poets gits a license to change names.
I recognize the features an' the traits, and they're the same 's
Our own Doc. Splint's. You can't fool me with change o' name an' place.
Them same fermiliar liniments is showin' on *Doc's* face;
The same brave heart and knowin' brain and stiddy, well-trained hand,
An' kindness to all livin' things in water er on land.
I see *our* Doc here jist as if he'd had his picter took.
F'm this on I can truly say I know 'im *like a book*.

ORTHOPEDIC SURGERY. By James E. Moore, M. D., Professor of Orthopedic and of Clinical Surgery in the College of Medicine of the University of Minnesota; Fellow of the American Surgical Association; Member of the American Orthopedic Association; Surgeon to St. Barnabas Hospital, etc., etc., Minneapolis., Minn. With 177 illustrations. Philadelphia: W. B. Saunders. 1898. 354 pages. Price, cloth, \$2.50 net. Galbraith, agent, New England Building.

The time is past when all the good books come from the Atlantic seaboard. This is the second one to make its appearance within a few weeks, written in Minneapolis, and a very good book it is too. The author has not made it for a complete reference book, but evidently for a students' text-book, and for an ordinary reference book for practitioners. He is rather partial, perhaps, to American authors, but we are not at all disposed to quarrel about that. He pays a good deal of attention to early diagnosis, and that is a good feature for the general practitioner, who may overlook or misinterpret early symptoms until more serious and difficult conditions develop. He does not describe many different plans of treatment; of course that would require a large volume; but he gives what he considers the best, judging from his own experience, and that always gives a book an individuality and a certain value which no mere compilation can possess.

TWO HEALTH SEEKERS IN SOUTHERN CALIFORNIA. By William A. Edwards, M. D., Fellow of the College of Physicians of Philadelphia, etc., etc., and Beatrice Harraden, author of "Ships that Pass in the Night," etc. Philadelphia: J. B. Lippincott Company. 1897.

Of course we all recall Dr. Edwards' work on the heart* and remember him as formerly having been a clinical instructor in the University of Pennsylvania and as one of the collaborators on Keating's Cyclopedia, while Miss Harraden is widely known to the general public as a clever writer. We are glad to see that although exiled by ill health they have not lost ambition and interest in their life-work. Miss Harraden contributes two charming chapters, the first graphically descriptive of "Southern California," its flora and its fauna, its climate and its scenery, and the fourth on "Out-door Life for Women." Dr. Edwards furnishes the other six chapters; the second and third on Climatology; the fifth on a variety of topics such as Expenses of Living, Classes of Health-Seekers that should Come to Southern California, Clothing, Method and Time of Arrival, Life to Lead, Amusements, Occupations, and Business Opportunities. The sixth chapter is devoted to Tuberculosis and Diseases of the Respiratory System; the seventh to "Those Benefited by the Climate," and the final chapter on "Those not Benefited by the Climate." The physician who is called upon for advice in regard to Southern California as a health station, as well as the health-seeker himself, will find here information upon the principal points essential for him to know. We can trust the information here given as reliable. It is not written by a guide-book maker, tour conductor, nor the agent of a railway company, and tells not only the truth but the whole truth about Southern California. If the little book goes to a second and subsequent editions, as it deserves to, we would suggest that a small simple map of the country described would be a useful and convenient addition.

STIRPICULTURE; OR THE IMPROVEMENT OF OFFSPRING THROUGH WISER GENERATION. By M. L. Holbrook, M. D., Editor of *The Journal of Hygiene*; Author of "Hygiene of the Brain," "How to Strengthen the Memory," "Advantages of Chastity," etc. New York: M. L. Holbrook & Co. London: L. N. Fowler & Co. 1897. 192 pages. Cloth, \$1.00.

If the critic makes a thrust at the pseudo-scientific character of existing works on stirpiculture, he lays him-

* Diseases of the Heart and Circulation in Infancy and Adolescence. By John M. Keating, M. D., and William A. Edwards, M. D. Illustrated with Photographs and Wood-engravings. Philadelphia and London: F. A. Davis, Publisher. 1889.

self open to a *riposte* in the shape of the query, "Why has the subject been so neglected by the medical profession?" This is hard to parry.

We must admit the importance of the subject. We cannot deny that in other lines of research popular beliefs have been hunted down and either disproven or accepted as containing a portion of scientific truth. It is a fact that scientists have discovered certain natural laws governing the improvement of offspring. It is obvious that the whole subject comes within the province of the physician; and yet the profession has not seriously attacked the problem, has not settled even theoretically how far the natural laws are operative or can be made operative in our state of high civilization, has accomplished little in the practical application of the knowledge possessed, and has not even succeeded in directing general attention toward the subject. In this unsatisfactory state of affairs we read what we can get upon the subject, and hope that capable scientific workers will soon turn their "logic engines," as Huxley would say, upon the topic and give us something really valuable and satisfactory. In the meantime such little books as this carry some truth. The one in hand is more sensible and practical than most of them, and will help to prepare the way for a fuller elucidation.

THRO' LATTICE-WINDOWS. By W. J. DAWSON. New York: Doubleday and McClure Co. 1897.

We have heard that the author of this series of sketches is an English doctor. Certain it is that he has somehow gained a wonderful view into human hearts and an intimate knowledge of the humble homes,

"Where house fires glow
Thro' lattice windows."

Each of the eighteen chapters or sketches is a story complete in itself, although the same characters run through the whole book. For humor and pathos, for fidelity to human nature at its little best, for odd originality and sympathy with the tender and the sublime in humble life, this book is in our opinion equal if not superior to anything that has been produced by the so-called "Kailyard school." Moreover, it can be understood. Such portions as are not written in the author's fine English are in "Henglish." Of course, this deprives it of the advantage

of a degree of mystery that attaches to the half-understood which is said to be marvellously shrewd. But it does not need any factitious aids. It is a very meritorious piece of work.

HUGH WYNNE, FREE QUAKER, SOMETIME BREVET LIEUTENANT-COLONEL ON THE STAFF OF HIS EXCELLENCY, GENERAL WASHINGTON. By S. Weir Mitchell, M. D., LL. D. Harvard and Edinburgh. In two volumes. Fiftieth Thousand. New York: The Century Co. 1898.

Now that Holmes is gone to his reward, it should be and is a great gratification to the medical profession still to have a representative able to stand in the front rank among *literati* of high renown. While Dr. Mitchell's previous productions were sufficient to demonstrate genius, the present work is not only his masterpiece, but one of the greatest novels which our times have seen. The writer of historic fiction has the task not only of making his story entertaining but of fitting it accurately into its framework of historic facts. To the imagination of the romancer he must add the precision of the historian and often the erudition of the antiquary. This Dr. Mitchell has done. "Hugh Wynne" is a great book. While we would delight to discuss the plot and the characters and the incidents, in fact, the pigments of the picture as well as the manner of their laying on, we will take space here only to mention what seems to us its chief and highest characteristic. While it is a great work of art, it manifests the deliberation and ease in its performance which characterize the operation of the laws of nature herself. There is not a sign of haste nor of straining after effect. All is duly accomplished in time, and without a show of effort. It reminds one of a half-forgotten saying by Black (was it Black who said?): "Every great work was done easily; but it is that kind of ease with which the tree blossoms, after long years of preparation."

When you read the book, bear in mind this opinion and judge whether it is not justified.

PAMPHLETS RECEIVED.

PARKER SYMS, M. D.: THE OPERATIVE TREATMENT OF HEMORRHOIDS; from *New York Medical Journal*.

C. W. SMITH, M. D., Cleveland: EFFECTS OF OBSTRUCTED RESPIRATION; from *Cleveland Medical Gazette*.

PROF. C. H. HUGHES, M. D., St. Louis, Mo.: THE VIRILE OR BULBO-CAVERNOUS REFLEX; from *Alienist and Neurologist*.

HENRY ALFRED ROBBINS, M. D., Washington, D. C.: DANGERS OF THE BARBER SHOP; from *Maryland Medical Journal*.

JOSEPH E. BLACKBURN, PH. G., Dairy and Food Commissioner of Ohio: ADDRESS BEFORE THE OHIO EDITORIAL ASSOCIATION, at Columbus, Ohio, December 14, 1897. POISONS IN PATENT MEDICINES.—An address before the Associated Ohio Dailies, at Columbus, January 25, 1898. BULLETIN No. 2, December, 1897.

CHARLES DENISON, A. M., M. D., Denver, Colo.: THE ANTITOXIN TREATMENT OF TUBERCULOSIS, OR THE DIRECT (TUBERCULIN PREPARATIONS) VERSUS THE INDIRECT (ANIMAL SERUM) METHOD OF MINIMIZATION AGAINST TUBERCULOSIS; from *Jour. Am. Med. Ass'n*. THE AUSCULTOSCOPE OR PHONENDOSCOPE VS. THE BINAURAL STETHOSCOPE; from *Jour. Am. Med. Ass'n*.

THOMAS B. EASTMAN, A. B., M. D., of Indianapolis, Ind.: OFFICE GYNECOLOGY; from *Indiana Medical Journal*.

JOHN K. SCUDDER, A. M., M. D., Cincinnati, O.: FAIR MEDICAL LEGISLATION.

L. HARRISON METTLER, A. M., M. D., Chicago, Ill.: THE NEUROSES OF GOUT; from *The Medical Fortnightly*.

MICHIGAN STATE BOARD OF HEALTH: QUARTERLY BULLETIN, Jan. 14, 1898.

M. A. GOLDSTEIN, M. D., St. Louis: ADVANCED METHOD OF TEACHING THE DEAF; from *The Laryngoscope*. BILATERAL SYPHILITIC ULCERATION OF THE AURICLE; from *The Laryngoscope*. THE TEXAS SCREW-WORM AND ITS INVASION OF THE NASAL CAVITIES; from *The Laryngoscope*.

WILLIAM S. CONNERY, M. D., Saginaw, Mich.: ANGINA PECTORIS; from *Medical Record*.

ROBERT NEWMAN, M. D., New York: ELECTRIC TREATMENT IN GOUT AND URIC-ACID DIATHESIS; from *Medical Record*.

X. O. WERDER, M. D., Pittsburg, Pa.: APPENDICITIS COMPLICATING OVARIAN CYST AND SIMULATING TORSION OF THE PEDICLE—WITH THREE CASES; from *Journ. Am. Med. Ass'n*. TONIC AND SPASMODIC INTESTINAL CONTRACTIONS—WITH REPORT OF CASES; from *Annals of Gynecology and Pediatrics*. TWO INTERESTING CASES OF INTESTINAL RESECTION WITH END-TO-END ANASTOMOSIS BY MEANS OF THE MURPHY BUTTON, WITH RECOVERY; from *Penna. Med. Journal*.

C. F. TAYLOR, M. D., of Philadelphia, Pa.: AN INHERITANCE FOR THE WAIFS; from *The Arena*.

C. TRAVIS DRENNEN, M. D., of Hot Springs, Ark.: REPORT OF TWO CASES OF SYPHILIS, WITH REMARKS RELATIVE TO PTYALISM; from *Medical News*.

CHARLES E. PAGE, M. D., Boston, Mass.: RHEUMATISM, RIGHT AND WRONG TREATMENT. VALUE OF THE FASTING CURE IN RHEUMATISM, FEVERS AND OTHER DISEASES; from *Medical Times*. APPENDICITIS,—A CASE, WITH COMMENTS.

L. WEBSTER FOX, M. D., of Philadelphia, Pa.: EPIPHORA, OR WATERY EYE; LACHRYMAL ABSCESS; NECROSIS OF THE BONY WALLS OF THE LACHRYMAL CANAL; IMPLANTATION OF A GLASS BALL FOR THE SUPPORT OF AN ARTIFICIAL EYE; GRATTAGE FOR THE RADICAL CURE OF GRANULAR LIDS; from *International Clinics*. OPHTHALMIA NEONATORUM; from *Medical Bulletin*.

Society Proceedings.

CUYAHOGA COUNTY MEDICAL SOCIETY.

The March meeting of the society was held on March 3rd, Dr. Knowlton presiding. The only paper on the program was by Dr. W. E. Linden, on "The Treatment of Typhoid Fever, with Special Reference to Hydrotherapy."

DR. LINDEN said that in typhoid fever the most mischief was done by high temperature. The cold water treatment most successfully combats this element. For some time he has practically applied the method in his practice. His plan of procedure is to put the patient in the tub at a temperature of 65 to 75 degrees every three hours, or if there are stupor and excessive fever, every two hours, keeping him there from ten to twenty minutes. Friction may be used, rubbing the back and limbs and applying cold to the head. Stimulants may be given just before taking him out. Hemorrhage has not been found to be a contraindication. The treatment both modifies and shortens the course of the disease. Much is due to the increased activity of the skin. Various symptoms are met by appropriate remedies. Abdominal pain, usually due to meteorism, is controlled by turpentine, either by mouth or rectum; diarrhea, by bismuth and morphin; constipation by mineral waters or castor oil; hemorrhage by acetate of lead, ergot, and opium. Heart failure seldom occurs under this treatment. An interesting dis-

cussion followed, opened by Dr. Sihler, the pioneer of the Brand treatment in Cleveland.

DR. SIHLER said that not only "may friction be used," but it must be used as an essential to the treatment. The early use of the baths is quite important; unfortunately this is often not possible. The typhoid poison benumbs the patient's brain; he will not send for the doctor until active symptoms set in. The great success of the treatment in military hospitals is that the patients are taken early. The chill at the time of the bath is the essential thing. An intense active contraction of all the muscles of the body benumbed by the poison is stimulated every two or three hours.

DR. H. J. HERRICK said that he had been impressed by the statistics of the water treatment, but that his own method had been so satisfactory and in accord with the feeling of his patients that he had not used the baths. He would no more think of using them for typhoid fever than for a cold. The term typhoid is objectionable. At first there is no typhoid but simply a continued fever, a symptom of a disease of the intestines; later, absorption takes place, and the condition called typhoid is established. His treatment is to clear out the bowels early, eliminate the poison early by means of calomel, followed by a saline. Allow no food that will obstruct; use such as will be absorbed in the upper part of the intestines. Beef tea, beef juices, juice of oranges and other fruits may be used. Milk given in quantities is pernicious. Follow the cathartic with alkaline corrective powders and aconite, continuing this for days. A warm, soft poultice is soothing to the bowels. Cold water applies to but one symptom. Why not treat the condition?

DR. O. B. CAMPBELL believes in the cold water treatment in selected cases, cold water acting as a stimulant to the skin and muscles.

DR. HANSON has used the cold water treatment as a last resort in several cases and has had surprisingly beneficial results. He said that typhoid fever was not an intestinal disease at first, but a general infection. General symptoms manifest themselves days before the intestinal disturbances. This being the case the poison cannot be eliminated by cathartics, and as to intestinal antiseptics enough could not be given in three weeks to disinfect one stool.

DR. DUTTON said that the success attributed to the water treatment was due to its supplanting the "killing

treatment." To diagnose typhoid in the first week is often impossible, consequently the cold water treatment can not be instituted at the time its advocates claim it should be commenced. The man who aborts typhoid fever always meets with a surprising number of cases. He believes in plenty of water, both within and without, but that the cold baths are no more necessary than other accessories. Lesions in the bowels are not found the first week, the infection is general, and it is nonsense to think of eliminating the germs from the bowels the first week.

DR. WATSON cited several cases in which the improvement on the pulse after the bath was marked. He had found the treatment both stimulating and soothing.

DR. LOWMAN said that he had cause to consider the cold water treatment the only treatment in typhoid fever. The typhoid fever of this section is usually mild and responds to any treatment. This is a reason for the Brand method not being used more generally. He had found nothing contraindicating the baths except in one case where a septic choroiditis developed. In this case the patient complained of severe headaches after each bath. The ideal way of treating disease is by hygienic modification. The cold water treatment in typhoid fever is a forerunner of this method. Intestinal antisepsis is absolutely useless. Critical urination occurs early under the Brand method, hence it is an eliminating method.

DR. TOWSLEE had in mind a number of cases in which she had used cold enemas and sponging every two hours with great success.

DR. P. H. SAWYER believes in the hydro-therapy in typhoid but has seldom used it. He believes its chief value to be as a hygienic measure.

DR. H. B. HERRICK said patients should be allowed a choice. We have no right to persecute patients. For his own part he would not submit to the discomfort of being thrust into a cold bath. He believed in simplicity in treatment.

DR. SPENZER spoke of the impracticability of disinfecting and rendering the bowels aseptic.

DR. KNOWLTON has used the Brand treatment for seven years and finds it meeting all the indications. The secretions are more active, fever is allayed, quiet and rest induced, elimination is effected, the amount of urine increases within forty-eight hours and continues of high specific gravity. The only bath objected to is the first one. To reduce this objection the first bath is

given at 85 or 90 degrees, and at succeeding baths the reduction of temperature to 70 degrees is made gradually.

DR. LINDEN closed the discussion with a few words, and the society adjourned.

McMICHAEL.

Correspondence.

PHILANDER SMITH MEMORIAL HOSPITAL.

NANKING, CHINA, Feb. 3rd, 1898.

Editor Cleveland Medical Gazette :

MY DEAR DOCTOR:—I keep up your acquaintance through THE GAZETTE, which reaches me regularly and which I very much enjoy reading; but I suppose you have forgotten me and counted me lost among the queues and shaven foreheads of the Antipodes. I wish that I might write you something of interest, but I fear that, with the medieval conditions affecting our work, my experiences will lack interest to a physician working in the midst of the advantages and progress of these days.

The past year has been a busy one. I had to attend to one thousand in-patients and over twenty thousand visits of patients to our dispensary. Malaria is the cause of a large part of the troubles we have to treat, and I have found great pleasure in studying the plasmodium. I have been interested in noting that at certain times most of my cases of intermittent are tertian and quotidian, and at other times the quartan type will prevail. I am not so well up in the use of the microscope as to diagnose the form of fever by the plasmodium, but I hope to get so I can make what Dr. Thayer used to call "a good Yankee guess at it."

Many of my patients do not like to mention the fact of their having malarial fever, as it is not only considered somewhat *infra dig.* to have the trouble, but they do not wish to mention the matter lest they have an attack for their temerity. "Speak not of stones" finds its counterpart in Chinese philosophy.

We have other troubles to treat, and our clinics present the usual run of eye cases, skin diseases, bronchial troubles, old ulcers, and an occasional curio in the way of disease that can only be found in a country like China.

While Western physicians in China have an unlimited opportunity to practise their profession, yet the Chinese, although freely admitting our superiority in surgery, attribute the highest skill to their own doctors in treating internal complaints. The occult, the rare and strange appeals to the Chinaman when it comes to considering his ills. Medical skill is hereditary, and a doctor's sign usually gives the number of generations through which his wisdom has been accumulating. A few days ago I had as a patient a Chinese doctor who came to me for treatment of an abscess on his own hand. He has considerable reputation as a doctor, his grandfather having been physician to the Emperor Hien Fung. Conversation with this native practitioner is rather amusing and instructive; instructive not particularly from a medical standpoint, but to the commonplace, everyday philosopher he gives some points. The other day he asked me if foreign doctors had any medicine that, when taken internally, would prevent the hair ever turning gray. He knew of hair dye, but said he had heard that we have medicine to prevent the hair ever losing its original color. I had to confess that we had no such potent and desirable remedy, but he immediately informed me that they have, and forthwith began to give me the formula, as follows:

Take five pounds of lacquer and three pounds of land crabs and put the crabs in the lacquer, where they will soon be dissolved. Then enclose three pints of small black beans in a bag and place them in the mixture and bring to the boiling point. The virtue of the crabs is then supposed to have entered the beans, and they should be taken out and dried. The dose is five beans three times a day, and they are to be taken until the finger nails begin to turn black, when you may know that there is no longer any possibility of the hair turning gray. From the numerous gray hairs adorning his own head, he shows the Chinese proverb to be true, "Liu yih puh tsih" (the famous doctor Liu could not heal himself). The above prescription is more simple than many. Most of them have as many drugs as the *Confectio damocratis*. But I am afraid I weary you. I enclose a couple of photographs of patients, one of elephantiasis and one of cancrum oris. With kindest regards to yourself and to others of my friends in Cleveland to whom you may have the opportunity of conveying my greeting, I remain, my dear doctor,

Very sincerely yours,

ROBERT C. BEEBE.

CLEVELAND, March 13, 1898.

Editors Gazette:

While running over the literature of the subject of my late paper, I had hoped to find out who coined the expression Imperative Concept, and the date of its introduction in the terminology of psychiatry. Not realizing my expectations, I addressed notes of inquiry to certain eminent alienists, from one of whom came the following answer:

MY DEAR DOCTOR:

NEW YORK, 30 XII, '97.

The mental strain and ingenuity manifested in coining the term (Imperative Concept) are very trivial. I first used it; it is a mere translation of the German "Zwangsideen." As I have never met it before, and had to devise the translation myself, it is safe to assume that, like Paranoia, Hebephrenia, *et al.*, I introduced them into English usage, suffering all the ridicule without getting the credit of an innovator. However, the latter does not worry me. I have real work ahead.

With best regards,

Dr. Brashear.

E. C. SPITZKA.

P. S.—The joke is that some have employed the term without knowing what it means. Strictly, Imperative Concept is the translation of "Zwangsvorstellungen." "Zwangsideen" and "Zwangsgedanken" are used as equivalents.

S.

Without the knowledge or consent of the distinguished writer, I take the liberty of offering his characteristic note to the readers of the GAZETTE, believing that they, and especially those who are interested in the study of the psychoses, may be interested in its subject matter.

Respectfully, etc.,

B. B. BRASHEAR.

Notes and Comments.

Dr. Christian W. Dellenbaugh, one of Cleveland's medical pioneers, died on February 3rd, at the age of sixty-seven years. He was the son of a physician, Dr. John Dellenbaugh, and was born at North Georgetown, Ohio. He prepared for medical practice at Jefferson Medical College, and for a short time after graduation practised in his native village, but removed to Cleveland in 1856. He resided in the same location, on East Madison avenue, from the time of first coming to Cleveland until his death. For many years, however, this section was without the city limits, being included in the village of East

Cleveland, of which he was the first mayor. Dr. Dellenbaugh married, in 1854, Miss Sarah A. Everett, who survives him, with two children, Judge Dellenbaugh and Miss Florence Dellenbaugh.

Dr. S. L. Webster, of the class of '96, Western Reserve Medical College, formerly of South Brooklyn, is assisting Dr. Ohlmacher in the pathological laboratory of the Ohio Hospital for Epileptics at Gallipolis.

Dr. Frank H. Honecker, who has been located at the corner of Pearl street and Clark avenue, Cleveland, for the past three years, will soon start for the Klondike.

Dr. A. J. Skeel has been appointed district physician in the place made vacant by Dr. Honecker's resignation.

Dr. G. C. Ashmun has been nominated by the Republicans of the Third District for a seat in the city council of Cleveland.

Sir Richard Quain, Bart., physician extraordinary to Queen Victoria, better known as author of a "Dictionary of Medicine" and other works, is dead, at the age of 81 years.

Dr. Norman O. Paulin, Western Reserve Medical College, '95, and Miss Emma Davidson, of Boardman, Ohio, were married on March 3rd. They will live at 1232 Euclid avenue.

Medical Society Publications. To me the ideal plan of publication for a society is to make up its own volume at the end of the year, leaving the authors to seek such media for immediate publication as they may themselves prefer. I do not, however, include in such media the lay press. The standard by which the acts of a physician are judged is a peculiarly high one, so high that the average layman cannot understand it. To him medical etiquette is an absurdity, and our objection to the ordinary modes of advertising he regards as unpractical. Yet this standard is the natural outgrowth of the physician's occupation. Succor to the suffering, mercy to the unfortunate, priest-like fidelity to confidences reposed, are practices which tend to shape out a lofty ideal, and to such an ideal commercial methods are foreign. The adage "business is business," which has always grated harshly on my ears in any application, is especially foreign to our ideal. The publication of medical papers in

the lay journals where they are likely to attract the attention of the lay readers to the physician-author constitutes, in my judgment, commercial method. On the other hand, let us not pretend that we are better than we are. Do not let us claim that we publish our papers in the professional journals on pure philanthropic grounds, or only because we have a valuable piece of information that we desire to impart to our professional friends. We publish also to enhance our own reputation, a perfectly justifiable procedure when accomplished through the medium of professional journals.—Dr. James Tyson's address as retiring president of the Philadelphia County Medical Society, in *Phila. Polyclinic*.

The University Free Clinic. The regents of the University of Michigan are confronted with the question, Who is entitled to free medical service at the University clinic? It is contended that as the clinic is state-supported, all citizens, rich or poor, are entitled to its privileges. It is to be hoped that the regents will avoid giving their sanction to such a view of the matter. It would be disastrous in the extreme, cruelly unjust, and imperil the honor of the medical profession. Those entitled to free medical service are the worthy poor alone. That a man should be entitled to the privileges of free clinics because he pays his quota of taxes in their support no more follows than that a man should go to the penitentiary, whenever he felt himself convicted of sin, simply because he contributes to the maintenance of such an institution.—*Medical Age*.

Etiology of Adenoid Vegetations. Dr. M. C. O'Toole, of San Francisco, reports (in *Jour. Am. Med. Assoc.*) removal of adenoid growths from several children of a mother suffering from leucorrhea. A child born after cure of the uterine difficulty has had no pharyngeal abnormalities. Since then he has found in all cases of these growths that the mother had abnormal uterine or vaginal secretions at the time of the child's birth. From these observations he ventures the opinion that obstruction of the nasal passages during infancy, following infection from maternal vaginal secretions, is the chief etiologic factor in the development of post-nasal growths.

Salicylates in Rheumatism. At present the salicylates are the remedies most to be relied upon, and in their use we may arrive at the following conclusions:

1. That salicylate compounds markedly influence temperature and pain in the early stages of rheumatism.
2. That they lessen the length of an acute attack.
3. That they do not lessen the frequency of complications.
4. That they do not prevent relapses.—Dr. W. S. Foster in *Penna. Medical Journal*.

Medical Examination for the Klondike. Mr. Robert McKinley, traveling on the Pacific coast, sends to the *Medical Sentinel* the following note for the benefit of medical prospectors:

"While traveling over my territory, I learned that a number of physicians contemplate a trip to Klondike to try their fortunes, hoping for a goodly share of nuggets for their professional service in the country of cold and gold. They did not know that it would be absolutely necessary to pass examinations before the Board of Examiners of the North West Territory (not British Columbia), whose headquarters is Calgary, and of whom Dr. Britt, Banff, N. W. T., is registrar. I have learned that the medical law will be enforced by the Provincial authorities."

Methylene Blue in Gonorrhea. Dr. Orville Horwitz reports in the *Philadelphia Polyclinic* the results of the use of methylene blue in 105 cases of acute gonorrhea. The diagnosis in every case was confirmed by bacteriologic examination, made by Dr. Howard F. Pyfer.

"The method of staining was that recommended by Professor Coplin. It consists in first fixing the pus on the glass by passing the slide through a flame, and then placing an alcoholic solution of eosin on the slide and gently heating it for ten or fifteen minutes. The slide is then treated with water until the washings are concluded, after which an aqueous solution of methylene blue is dropped on the slide and allowed to stand two or three minutes, when it is again slowly washed, slowly dried, and mounted in balsam. Gram's stain was not employed, Dr. Coplin's method being deemed more satisfactory."

The following formula was used for administration:

R — Methylene blue gr. ij.
 Oil of sandalwood gr. iij.
 Oleo-resin of copaiba gr. iij.
 Oil of cinnamon gt. j. — M
 Dispense in capsule. One dose.

This was given three times daily. In a number of cases where the remedy produced slight diarrhea and strangury, nutmeg incorporated in the formula obviated the difficulty.

The following conclusions are deduced from the study of these cases:

1. Methylene blue is a germicide of great value in cases of acute urethritis due to the presence of the gonococci.

2. It will not abort the disease, but will materially shorten its duration.

3. It markedly lessens the tendency to complications.

4. It is not to be employed in the treatment of acute urethritis unless a bacteriologic examination demonstrates the existence of gonococci.

5. The remedy should be employed as soon after infection as possible.

6. The proper dose with which to begin treatment is one grain three times daily, to be increased to two grains if the remedy is well borne.

7. The beneficial action of methylene blue is enhanced and the duration of the disease is shortened by combining it with copaiba, sandalwood, and salol.

8. The injections of potassium permanganate by means of a hard rubber syringe, or, if possible, by irrigation, administered in the early stages of the disease and followed during the period of decline by an astringent injection, have a marked tendency to lessen the duration of the malady.

9. Methylene blue has the effect of coloring the urine a deep blue. Of this the patient should always be informed to prevent unnecessary alarm.

10. Methylene blue is of no service in cases of non-specific urethritis.

Further investigations are being made by Dr. Horwitz on the use of methylene blue solution for urethral irrigation.

Estimation of Uric Acid. At the Clinical Laboratory Society of Baltimore, on Feb. 19th, as reported in the *Maryland Medical Journal*, Dr. Whitney described a modification of Hopkins' method for the quantitative estimation of uric acid in the urine in use at the Baltimore Medical College. 100 c.c. of urine are treated with 30 g. of ammonium chlorid. After two hours' standing the mixture is filtered and the precipitate

washed with a saturated solution of the salt. Filter and precipitate are placed in an Erlenmeyer's flask, treated with 10 c.c. of decinormal solution of hydrochloric acid, diluted to about 50 c.c. with distilled water, and brought to the boiling point, when the excess of the hydrochloric acid not used in the decomposition of the ammonium biurate is retitrated with a decinormal solution of sodium hydrate, using methyl orange or dimethyl-amido-azo-benzol as an indicator. This excess is deducted from the original 10 c.c. The result multiplied with 0.0168 will indicate the amount of uric acid contained in 100 c.c. of urine.

Medical Fees in Court. The following victory for medical fees was recently gained in Washington. Dr. Briggs received full payment for his bill, \$500 for an operation and \$300 for after treatment. The jury reduced the assistant's fees. Dr. McKone testified that the operation alone was worth \$1,200 for a man in moderate circumstances, and Dr. Eagleson, of Seattle, corroborated his statement. "The operation was an excision of 24 inches of the ileum. The jury were all farmers with long whiskers."—*Medical Sentinel*.

Practical Points About Worms. It is a good rule never to make a diagnosis of worms unless worms have been seen to pass from the child. The most common variety, the pin-worm or thread-worm, lives by preference in the rectum and lower colon, and has a habit of crawling out of the anus at night when the child is warm in bed; or, if not seen then, they are commonly forced out with the feces and can be found in the passages if the mother take the trouble to hunt for them. . . .

They seldom ascend beyond the ileo-cecal valve, and are more easily reached by the anus than by the mouth. The simplest fluid to use is a solution of salt in water, a teaspoonful to the pint, and the best time to inject it is directly after the daily evacuation of the bowels. Another useful injection is an infusion made by steeping for half an hour an ounce of quassia chips in a pint of boiling water, straining the fluid and using it when it is cool. But in some cases, where the worms have migrated high in the colon, they are not all reached by rectal injections, and to this treatment must be added that of drugs by the mouth. For this purpose the most useful mixture I know is the one suggested by J. Lewis Smith, of santonin and

the fluid extract of spigelia and senna.—Wm. Fitch Cheney in *Pac. Rec. of Med. and Surg.*

The Physician's Signature. It will not be questioned, we presume, that the physician should be a person of dignity. But the dignity must be innate; it must not be put on. Is it dignified for a man to prefix the abbreviation of his professional title to his name written as a signature? We are aware that it is customary for our German colleagues to do so, but for what reason we never could understand. Of late we have noticed a tendency among the very young native American physicians to do the same thing. We think it is not to be commended.

Custom sanctions the use of "Dr." on a physician's visiting card and on a hotel register. The abbreviation M. D. is ordinarily appended to the doctor's signature to a certificate only by request, and that almost always when the matter certified to is medical. Titles seem to us to be ludicrous on a financial document—we mean, of course, signatures. We may be oversqueamish in this matter, but if anybody has anything to say in favor of the titled signature we should be glad to hear it. Appended to a letter, it is to us offensive.—*New York Medical Journal.*

Drugs in Uterine Hemorrhage. Dr. W. G. Johnston, Titusville, Pa., reports (*Penna. Med. Jour.*) the use of atropin in post-partum hemorrhage, as recommended by a Southern physician two years ago. In his first case it produced remarkably happy effects. He says further:

"Since that time I have tried it in four other cases of uterine hemorrhage, and in each case with good results. I used it in each case only after I had failed to get results with other means. One of the last four cases was similar to the first case, but not so severe a one. Two were simple hemorrhages. The last case I tried it in was one of hemorrhage with uterine cancer. In this last case I found it useful in checking the hemorrhage, but not of near the value it was in the other cases, where it acted almost as a specific. I used it in all cases in doses of one two-hundredth of a grain by the mouth every two hours."

Movable Kidney. This condition exists in a large number of women, and men as well, who believe that there is something wrong, yet are assured by their physician that he can discover nothing to account for their sub-

jective symptoms; consequently, too often these patients are classed as hysterical and treated accordingly. The main reason for presenting this paper is to call your attention to a morbid condition, presenting distinct symptoms, easily verified by a physical examination, yet in most cases overlooked by the general practitioner, and in many cases by the specialist. The frequency in women has been referred to. I am not aware that any one has published statistics as to the frequency in the male, but I know it occurs more often than has been supposed. Most of the reports have come from gynecologists, whose interest in the male sex is naturally quite small. It is not unlikely that the phantom tumors described by older writers were in many instances wandering kidneys. . . .

The diagnosis of movable kidneys is very easy, particularly if one's fingers are educated in tactile work. The patient is placed on the back with legs and thighs slightly flexed; in this position the kidney will usually slip back in its proper place. The physician grasps the side just between the lower rib and the crest of the ilium, not too tightly, else the kidney will be held in place. The patient is directed to take a long breath, when the kidney, if loose and not held too tightly, will be felt passing beneath the fingers or thumb, as the case may be. After it has passed beneath the fingers, the parts are grasped a little closer, and the kidney is held in its abnormal position, when it can be easily felt with the other hand, and made to slip back to its normal position. The treatment is not so easy as the diagnosis. I have prescribed a number of different kinds of support, but on the whole the most satisfactory has been the ordinary abdominal support which is usually worn after a celiotomy. Men can use an ordinary belt worn next to the skin. These supports should always be applied when the patient is on the back. Many patients learn to locate the kidney and apply the support accordingly.—Geo. McNaughton in *Brooklyn Medical Journal*.

A Texas Compositor. Dr. Daniel of the *Texas Medical Journal*, referring to a recent editorial in the *Statesman* on typographical errors, relates an amusing experience in that line. He says that he wrote: "Dr. Jno. Ballyhache aet. 74 years, born July 22, 1822, and died—" Imagine his disgust when it appeared in the journal, "Dr. Jno. Bellyache ate 74 ears of corn July 22, 1822, and died."

Tears as a Remedy for Chronic Diseases. A physician

who has recently returned from Persia says that the Persians believe human tears to be a preferred remedy in many chronic diseases. At every funeral the bottling of mourners' tears is one of the chief features of the ceremony. How different our custom! We *unbottle* our tears over our chronic diseases.—*Exchange*.

Formaldehyd Injections for Acne Rosacea. Dr. J. T. McShane (*Jour. Am. Med. Assoc.*) reports the following: "The patient, an unmarried lady, 30 years of age, has suffered from acne rosacea, with pustulations and papulations, for about ten years. The entire face was involved with redness most marked over the cheeks and nose, and always worse during menstruation. The patient is well nourished, but has suffered from nervousness and despondency, perhaps due largely to her necessary isolation from society on account of the bad appearance of her face. She has been under professional care of several first-class physicians, and all the usual means of treatment have been resorted to, but without avail. I decided, with consent of my patient, to use intra-dermal injections of formaldehyd in the strength of one drop of the 40% solution to 100 drops of water. The injections were attended with stinging pain, which the patient compares with the sting of a bee. One-half to one minim was injected in each point selected, care being taken to pass the needle into but not under the skin. In a few minutes a spot about the size of a ten-cent piece, immediately surrounding the point, presents an elevated surface resembling urticaria. A sufficient number of injections were made at each treatment to affect the whole area of the disease, and the treatment repeated at intervals of one week. The results have been most gratifying, and now after four months' observation and treatment the face is normally white, with little or no tendency to recurrence of the disease."

The Art of Neglecting Wounds. When a granulating wound is suppurating freely, there is a strong temptation to wipe away the pus with a sponge or gauze, but we should avoid doing this. There are two principal reasons for this. The first is, that the granulation tissue suffers traumatism whenever it is touched, no matter how light that touch, and as a result of such traumatism there will be developed exuberant granulation tissue which will be poorly supplied with blood vessels. We have in weak granulations, so to speak, what might be called "watered stock." It is a very common result of our well-inten-

tioned but ill-directed efforts at keeping the wound clean. If we place gauze upon the granulations we injure this granulation tissue still more, for the little filaments of the gauze entangle the granulations in the meshes, and on the removal of the gauze small fragments are necessarily broken off. In order to avoid wiping away the pus from the granulation tissue, it is well to cover the wound with a very soft and well prepared gutta percha tissue, or with Lister's protective silk. But if we neglect the wound by not wiping it, and by covering it with this protective, a good deal of fault will be found with the surgeon by the family and by nurses. This little matter, though based upon well-known pathological evidence, has not received the general attention that it deserves. I see wounds dressed too often and wiped too freely—altogether too much is done—because our sense of neatness is allowed to take precedence of our more sober sense, founded on pathological knowledge. When the epithelium is shooting across the wound, it is still more desirable to "neglect" the wound. This thin epithelium is extremely delicate, and the slightest touch will damage it. If we remove gauze directly from its surface at short intervals, we are bound to remove some of this hyaline epithelium, and by so doing we distinctly retard the healing of the wound. If a dressing is allowed to remain for five or six days on a suppurating wound, the family will be likely to complain; yet in most wounds we are doing the best for our patient by refraining from meddling with the reparative process.—Dr. R. S. Morris, *The Post-Graduate*.

Ligatures and Sutures. During the past three years the majority of surgeons and gynecologists operating in the twin cities of Minneapolis and St. Paul have been using, with the most gratifying results, catgut prepared by dry heat, after the method devised by Dr. Boeckman, of St. Paul. The writer has repeatedly ligated the carotid, thyroid, axillary, renal, ovarian, uterine, and femoral arteries, and the deep jugular vein with a small size (No. 15) of this catgut, and in no instance has there been secondary hemorrhage. . . .

Dr. Boeckman experimented with the product of a number of different manufactures of catgut before he found one that would not become brittle when exposed to the necessary temperature for complete sterilization. The gut that I have used (made under Dr. Boeckman's directions) has always been strong and pliable.

In preparing catgut by this process it is taken without any previous preparation, cut in 20 or 40-inch lengths, each piece wrapped in paraffin paper and sealed up in a small paper envelope. These envelopes are then put in Boeckman's sterilizer and the temperature gradually raised for about three hours to 284° F. It is then kept between this and 290° F. for four hours more, making in all seven hours. These envelopes can be kept along with the surgeon's instruments and dressings. When going out of the city to operate I drop a number of envelopes of assorted sizes into one of the pockets of my bag, where they are left until wanted. A person with unsterilized hands can tear off the end of the envelope and drop the catgut with its paraffin wrapper into the operator's hand, or upon an instrument tray. This catgut when dipped for just a moment in warm sterile water, is perfect as a ligature material; prolonged soaking makes it unreliable.

In conclusion, I wish to state most emphatically that buried unabsorbable sutures are useless and harmful, and I will predict that the day is not far distant when they will be abandoned by all who practise aseptic surgery.—J. E. Moore, *Phila. Med. Jour.*

Dr. Joseph O'Dwyer. It comes to very few men to achieve so much by a single surgical suggestion as that which was secured by Dr. Joseph O'Dwyer's invention of intubation. By inserting a tube in the trachea, which produced an artificial lining to take the place of the diseased one, he obtained a perfect access of air to the lungs. This process, which he called intubation, has saved many a life, and we believe there is no one to contest Dr. O'Dwyer's claim to it as his own discovery. There have not arisen, as so often arise in cases of useful inventions, many to contest the rights of the reputed author to priority. In France, intubation was suggested, we believe, prior to Dr. O'Dwyer's time, but it was entirely without his knowledge, and it was never adopted as a mode of treatment.

Dr. O'Dwyer was a singularly modest and reticent man. Not but that he had a very clear notion of his capacity, but he was very reserved in the expression of his ideas about himself. He was a successful teacher and, as he was connected with the Post-Graduate school for four years, we have full knowledge of his merits in that direction. But inasmuch as he was not enamored with teaching and was of a peculiarly sensitive disposition, he did

not continue his public work very long, much to the loss of the eager men who wished to learn intubation at the hands of its author. Dr. O'Dwyer was in his fifty-eighth year when he died. He was born in Ohio. His academic course was completed in McGill University, at Montreal. He was graduated from the College of Physicians and Surgeons of this city, in the class of '66. He died of meningitis.—*The Post-Graduate*.

Operation for Appendicitis. My discussion is brief, as enough has been said by experienced and reliable authority on this important subject to influence the profession in the right direction; yet the profession has not been influenced to the extent that was hoped. Operations have been refused, delayed, and postponed for a variety of unsurgical reasons. Appendicitis is always appendicitis; the diagnosis as such is made or not made; the diagnosis is that of appendicitis or something else. If appendicitis, there is but one treatment, *i. e.*, early, prompt removal of the offending organ.

Tinkering of any character, as in all other virulent troubles, is never justifiable; the deaths from delays are numerous, and the complications, if death does not result, are very great and difficult to deal with. Recurrences are dangerous and complicating. The strong argument in favor of prompt primary surgical interference is that the operation is safe and easy in the hands of an experienced surgeon or those who have observed and carefully studied all the details of the operation, and the mortality is nil or very low. General surgeons have been obstructionists on this subject; they have nursed a dread of sepsis or infection. They had the same terror of the peritoneum; their early and long continued opposition to ovariectomy had its source in like fears. Incomplete operations have been too common; this fact must be charged to the unreasonable, unfounded fears I have referred to.

Surgical completeness is essential to secure the best results. Simple incisions, with imperfect gauze drainage, is one of the mistaken yet common methods, followed usually by fecal fistula, prolonged slough, and suppuration. The appendix should be removed in every case, the operation made complete at any cost, as in intra-peritoneal and pelvic operations.

The law as laid down by Mr. Tait, that intra-peritoneal operations should be completed at any cost, applies with as strong or even stronger reasons to appendicitis than to bilateral suppuration of tubes and ovaries.

In the pelvic operation the suppuration and adhesions are much more general and extensive. Results can only be perfect in the completed operations.—Joseph Price in *Med. and Surg. Reporter*.

Another View. In reference to the proper time for operating, early or late, if seen early, no tumor or abscess forming, there is no need of haste; I would rather operate from the tenth to fourteenth day than the sixth to seventh day, for early the walling off is not as firm as later, and there is no danger of infecting the abdominal cavity, though I think we might wall it off sufficiently with gauze and prevent such infection if it were necessary, but I prefer to make the operation later, especially when you are without trained assistants, which in many cases you are. This condition depends upon the judgment of the operator far more than any other in the domain of surgery. . . . As regards the removal of the appendix in all cases in my opinion the essayist showed good judgment in not searching too long for the appendix. I don't do so very long, especially when it is embedded in the abscess and I cannot bring the cecum out upon the abdomen; I don't search for the appendix; I may make a mistake in not doing so, but prefer to open the abscess and drain, and in such instances have never had a recurrence, from which, if I should be so unfortunate as to personally have an abscess, I would tell them to open the abscess and let the appendix take care of itself.—Joseph Ransohoff, *Lancet-Clinic*.

A Point in Diagnosis. Now what are the diagnostic points that are the most prominent? My observation has been that there is one symptom never absent—understand, I say never; that sign is vomiting early in the very onset of the disease. True, it may be only once, perhaps twice; it comes almost instantly with the onset or first intimation of pain. Show me a case of appendicitis, and I will show you a patient who will tell you that he or she vomited almost the very first thing. Very likely not again, unless after several days no one has interfered, and general peritonitis results, then of course vomiting occurs.—H. B. Perry, *Atlantic Medical Weekly*.

THE Cleveland Medical Gazette

APRIL, 1898.

Original Articles.

THE IMPORTANCE TO THE GENERAL PRACTITIONER OF A KNOWLEDGE OF CHILDREN'S DISEASES.*

BY WM. A. KNOWLTON, M. D., CLEVELAND.

The subject of pediatrics is old, but a baby is always new and interesting, and I maintain that a doctor of medicine cannot better begin his professional career than by studying a baby. And I assert with equal confidence that the doctor who understands babies will be successful in any department of medicine, for he will have so mastered the art of accurate observation, so trained his powers of analysis, become so expert in tracing to hidden sources the causes of manifest signs, will have become so patient, so persistent, so firm, and yet so kind, that failure will be impossible.

A baby fills an intelligent and thoughtful observer with awe and reverence. And yet it is important to know when a baby should be spanked. My personal opinion is that this remedy ought to be applied in some cases very early.

It is important that the general practitioner should understand the diseases of childhood in his own interests, but especially in the interests of the children. If

* Read before the Ohio State Pediatric Society, Cleveland, May, '97.

he is the children's friend, if he brings to the management of their ailments all attainable knowledge and skill, he has the mother on his side, and that means the family, and then the whole neighborhood.

I shall dwell later on the importance to the children that the family doctor be quick to recognize and competent to treat their disorders or give appropriate advice concerning them.

But from a purely scientific standpoint the benefits to be derived from the study of the diseases of childhood are very great. In infancy and childhood the component parts of the human mechanism have not been impaired by the wear and tear of abuse. Important organs have not been wrongly educated, or offended and outraged until they are in a state of continuous or periodical and explosive revolt—a state of hyper-activity on the one hand, or of sullen inaction on the other. In a healthy child the various parts sustain to each other their normal relations, mutual reaction is prompt, all organs perform their proper functions with cheerful alacrity, and are quick to resent ill-treatment. The unstable equilibrium of organs in childhood is only apparent. If the organs of a healthy child are not imposed upon, if they are given a fair chance they take up their duties at the proper time and perform them with punctuality and regularity. A well-born calf running with the cow is never sick. The *minor* disorders of childhood therefore offer excellent opportunities for observing the beginnings of disease, for observing the speedy effects of harmful agencies on the sensitive, finely balanced human organism.

Infancy and childhood, then, afford a rich field for the study of normal organic function, for observing the mutual reaction of organs, for learning the causes of disease. As in the investigation of physiological and pathological processes, so in the study of therapeutics the disorders of early life afford superior opportunities. In fact, here is the best field for the study of what, for the lack of a better name, I will call *pure* therapeutics. The mental attitude of the patient toward the remedy as

regards belief or disbelief in its efficacy, the entire element of suggestion, is here eliminated, and we may observe the direct effects of therapeutic measures upon organic function, upon pathological processes.

And here, without detracting in the least from the importance of diet and hygienic measures in general, I wish to speak of the value of drugs in the disorders of childhood, and the inference therefrom of their value in the diseases of mature life.

Not long ago a writer, in an able article on the indications for drugs which affect the circulation, said that he could conceive of no condition wherein a cardiac sedative was indicated. Now, careful observation of the effects of cardiac sedatives—as aconite, for instance—in the early stages of many of the inflammatory and febrile affections of childhood, would convince the most sceptical, it appears to me, that the heart not infrequently does more work than the conditions call for, that there is harmful cardiac hyper-activity, and that to put on the brakes is conservative, curative. If the causes of the hyper-activity, whether toxic and irritating substances in the blood or tissues, or obstructions in the course of the circulation, could always be speedily removed, this would be the more rational treatment; but our limitations in this direction are so well recognized that the alternative of cardiac sedation commends itself to the reason, and in practice is found most useful. That in infancy and childhood an incipient bronchitis, pneumonia, pleurisy, or grave cerebral disorder may often be favorably modified by small and frequently repeated doses of cardiac sedatives is demonstrable, I think, as far as anything is demonstrable in therapeutics. Again, a very bright and entertaining writer recently classed cod-liver oil, along with some other things, as fetiches, as having “no notable character save a vile stench.” Had this writer carefully observed the improvement following the administration of cod-liver oil in rickets, marasmus, and many wasting diseases of childhood, as many have done, would he have spoken so slightly of this remedy? Who that has wit-

nessed the marvelous effects of hydro-therapy in early life could think of withholding such a blessed resource in the diseases of adult life?

Yes, indeed, the general practitioner should acquaint himself with the diseases of childhood, for he may here learn most valuable lessons in etiology, pathology, and treatment.

But over all is the fact, stern fact, that the children have rights which the doctor is bound to respect. They have at least equal rights with adults to life and the pursuit of happiness. But they are helpless. They are dependent upon the good sense and discriminating judgment of parents, upon the honesty and skill of doctors in whose choosing they have no voice. The helplessness of childhood appeals to the conscience, the honor, the manhood in the doctor. The little ones are at his mercy. Will his conscience, will God forgive him, if through ignorance or neglect he is false to his trust?

In England, over 17 per cent. of all children born alive die in the first year, and over 25 per cent. by the end of the fifth year. Do we do any better here? A fearful responsibility rests somewhere. When the responsibility is divided up between the parents, society, the civil authorities, and the doctors, what share lies at the door of the last? And then the crippled, the deformed, whose lives are blighted! Are any of these true witnesses of the culpable ignorance of general practitioners? And then the large list whose inherited bad tendencies of body or mind might have been corrected by timely attention and advice. To know the child the doctor must know the parents. It is a wide field and calls for high powers of observation and deduction.

Imagine the general practitioner who has led a busy life but who has not done his duty by the children reviewing, at sixty or seventy years of age, some of the results of his ignorance, carelessness, or neglect. As the long procession passes before him, the crippled, ruined joints, the bent and twisted spines, the angular, shrunken chests, the vacant faces, the blinking eyes, deaf ears, the de-

formed in body, mind, or character — would he not feel that for him there could be no peaceful repose to which his years and a life of duty well done would entitle him?

Would not these visions continually rise before him to murder sleep? In his daily walks would he not dread to meet at every turn some one of these living monuments of his incompetency, which like a Banquo's ghost would not down? And then the little mounds scattered through the graveyards! Ah, well! the best of doctors are troubled with unpleasant reflections. Mistakes are common enough everywhere. But every impulse of our better natures, every instinct of humanity calls upon us to deal honestly, intelligently with the little ones whose lives, whose happiness are committed to our care.

All honor to those who have formed the pediatric society of Ohio. May the good work prosper, and may generations yet unborn rise up to call them blessed.

THE ARMY SURGEON IN THE LAST WAR.*

BY A. G. HART, M. D., CLEVELAND,
Late Surgeon Forty-First Regiment, O. V. I.

Among those present will be some whose recollection of the army medical organization and service may not agree at all points with my own. The lapse of thirty-two years, and some presumable variations in the military departments, will account for this. My own experience was in the western army from September, 1861, to November, 1864.

The medical officers of the regiment were a surgeon and an assistant surgeon. In Ohio, from time to time during the war, the Surgeon-General of the State gave notice that there would be held at Columbus an examination of physicians desiring to enter the medical department of the service. The examinations were written, thorough and full, so far as our knowledge of medicine and surgery extended at that time. At first it was required that surgeons should be graduates of ten years'

* Read before the Cuyahoga Co. Medical Society, April 7, 1898.

standing; assistant surgeons, five years. These requirements were materially modified as the war went on and the difficulty of securing suitable men increased. Ohio had 198 infantry regiments and 13 of cavalry in the field. The records show that during their term of service they averaged four and a half medical officers each.

Besides these there was a very considerable number of so-called acting assistant, or contract surgeons, who did duty chiefly in hospitals, batteries, or detached commands. So that to provide medical officers for the 210 regiments during their term of service required 950 men. If to this number we add, as a low estimate, 50 contract surgeons, not less than a thousand Ohio physicians entered the service during the war. During the latter part of the time, while many able men came forward, it was inevitable that the standard should be lowered; some, as I know from personal observation, were men of very limited experience and even recent graduates. Only the impossibility of securing experienced men justified their employment for the responsible duties assigned them.

Having passed the examination and been put on the eligible list, the assignments to regiments were made by the governor. Practically, I think they were made largely at the request of the officers of the regiments, who selected friends who had taken the examination with the understanding that they were to be so assigned. The acceptance of a commission was voluntary. But, once sworn in, only the war department could accept your resignation during your term of service.

The surgeon ranked as a major, his pay \$165 a month; assistant surgeon as captain, pay \$130. Out of this he must pay for his own subsistence, horse (forage was furnished), uniform, servant's pay, and etceteras; all amounting to \$75 to \$125 per month, according to circumstances and economy. At first, while in camp, the sutler provided a mess table for all the officers, each paying his share of the expense. But when we got on the field we had to break up into small messes. The officers of the company went together. The field and staff usually did the same. The

commissary sold officers provisions, and provided some not issued to soldiers.

Beside the regimental surgeons there were appointed, on examinations ordered from Washington, surgeons and assistant surgeons United States Army (U. S. A.), and surgeons and assistant surgeons United States Volunteers (U. S. V.).

Every brigade and division and army corps headquarters had a surgeon on their staff. At first in the West they were largely detailed from surgeons of regiments on the field, where they had shown medical and surgical ability; but they were *detailed*, not *promoted* to a higher rank as they should have been, when the vacancies in their regiments could have been filled by appointments from their own States. But after a time these higher appointments were filled from the ranks of the United States surgeons I have just mentioned, who were, as a class, not men of remarkable ability, and, not having been on the field, knew nothing of the duties to which they were assigned. This left regimental surgeons as the only officers not eligible to promotion for able and faithful service. At the present time, only appointments as assistant surgeons are made on first examination. Surgeons are appointed from the list of assistant surgeons on later and more severe examinations.

Nominally, the surgeon was supreme in his department, and could excuse from duty any officer, or soldier, or company, and even the entire command. But the military necessity often dominated everything else, and when the invalids might determine the fate of a battle, even a sick man, if able to get to the battle-field and to load and fire his musket, must go into the fight. But does it not sometimes kill the man? Undoubtedly; but killing is what battles are fought for. Usually the excitement carried the man through the battle, and often no serious effect followed, especially if the man only had what soldiers called the "bullet fever."

The first duty of the surgeon after joining his regiment was that of examining the recruits. It was his duty

to make this thorough in every respect, so that none but able-bodied men should be enlisted. But he had no real knowledge of the duties required of the soldier, or of the demands to be made upon the vitality of the men. How could he estimate the effect of the great change from civil to military life. The cry was that the war would be over in 90 days, and the regimental and company officers urged the acceptance of every available man. The surgeon could not but be affected by the constant calls to fill up the regiments and get to the front as soon as possible. Under this pressure many were passed who proved utterly unfit for military service, and when put on ordinary steady duty, and especially on a march, with a soldier's impedimenta, they were soon in hospital or convalescent camp. The surgeon soon had the experience of seeing the stalwart six-footers, the pride of their companies, men determined not to fail, give out entirely, go to hospital, and perhaps never rejoin the regiment. At the same time he would see the slender "counter-jumper," or the disreputable, snug built "bummer," carry his gun, accoutrements, knapsack and rations, without flinching, on every march and in every battle.

The enlistment age was 18 to 21 years, but many boys at 16 and 17, calling themselves 18, were accepted. As was to have been anticipated, these boys were most of them a dead weight on the service. The men who did almost the whole of the marching and fighting in my regiment were between 19 and 40.

On urgent solicitation, my commanding officer issued an order for the revaccination of the regiment. This was bitterly opposed by the men, but thoroughly enforced. Many complete vaccine pustules and a multitude of incomplete ones resulted. The old Jennerian virus was used, furnished by Cleveland physicians, bovine virus not having been introduced at that time. The result was complete immunity from smallpox on the part of the regiment, after repeated exposure where regiments around us, not revaccinated, suffered severely from the disease.

The surgeon's second regular duty was the morning

sick call. Every morning, whether in camp or on the march, the bugle sounded this call. The orderly sergeant of each company brought to the surgeon's quarters those reporting sick. He gave a list to the surgeon, who examined each man, prescribed, and the hospital steward entered the prescription on the hospital record, and if possible gave the man his medicine then. The surgeon on the sergeant's book reported the men according to their condition; as "to hospital," "to duty," "excused from drill," "light duty," etc. And here at first the surgeon is sure to get into trouble. For if it is true that,

" For ways that are dark,
And tricks that are vain,
The heathen Chinese is peculiar,"

what can we say of the army maligner, save that he is *very peculiar*. At our rendezvous on what is now Forest street in this city, on three successive mornings, men reported sick, complaining of backache and headache, and with a very heavily coated tongue, but with no other symptoms. Thinking it might prove an oncoming fever, I excused the first and second lots, and then saw that they were "old-soldiering the surgeon." Long afterwards one of the men explained the trick. The camp was surrounded by rose bushes in bloom, and a liberal chewing of rose leaves produced the effect I saw on the tongue. This is but an illustration of innumerable devices to mislead the surgeon and get excused from duty or escape the battle-field.

The hospital steward was in effect a dispensing drug clerk, and if efficient and faithful, he could be of great aid to the surgeon.

The medical supplies for a regiment of 1,000 men in the field would now be thought "fearful and wonderful." Mine filled two four-horse army wagons to the cover: a few tinctures, no fluid extracts, but fortunately a full supply of opiates, chloroform, and quinin; the rest almost entirely crude drugs. What would now be thought a fatal defect was the entire absence of antiseptic remedies. A liberal supply of carbolic acid, even, would have been an inestimable boon. But the science of bacteriology was

utterly unknown. Now, the army medical supply table is up to date in every particular.

Each regiment had a hospital organization. Every company detailed two soldiers as nurses whom the surgeons could call upon. Of course, they were utterly inexperienced, and often detailed by the company commanders because of their unfitness for duty as soldiers. One nurse for each ten patients could be called for,—convalescents must assist as far as possible. At first three hospital tents, 16 x 18 feet, and two ambulances were issued to each regiment; finally, as the regiments became smaller, one of each. Three men could lie down in the ambulance, or six or eight could sit up. On the march the ambulances followed the regiment, and the surgeon gave a written order for transportation to men becoming sick or exhausted. One hospital wagon for each regiment followed the brigade, carried the hospital tents, extra hospital supplies and medicine, and came up to its own regiment when the halt for the night was made. As far as possible the sick were sent back on supply trains, or if situated to do so, were left in general hospitals, of which I will speak again. It was very important to retain with the regiment men not seriously ill, until able to go on duty again.

It was at first a great surprise to see the facility with which the sick recovered on a march. I repeatedly carried men with typhoid fever in an ambulance until they recovered; but when pneumonia was a complication, a fatal result was almost certain.

A very important duty came to the surgeon when, after being in camp for a time, we were ordered to take the field. All who considered themselves unfit to march reported to the surgeon. Some idea of the hardships to be met could perhaps be obtained from the superior officers. Probably they knew no more than the surgeons. There were to be considered the season of the year, whether the men were well clothed and shod, the prospect of full rations, and above all the physical conditions and morale of the men. If all were left back who claimed

to be unfit for field duty, there would soon be few men left in the regiment, and the surgeon could not always justify his decisions to the men.

Shall I illustrate out of one of the numerous similar experiences. My regiment fought the battle of Shiloh, April 5th and 6th, 1862, with a loss of 142 men, 39 per cent. of those engaged, with much unavoidable demoralization of the men. About June 1st we were ordered to take the field and march south into Mississippi, and 25 or 30 men reported to be excused from going. I examined the first man, and said, "You are not very strong, but I think you can go." "Doctor, do you think I ought to go?" "No." "Are you going to make me go?" "Yes." "Is that right?" "Under our circumstances, yes." Then I said to the men, "We are here to help put down this rebellion, and some of us will die in doing it. If we were at home it would be a shame to compel some of you to perform even ordinary labor. But the conditions here are entirely different. There is no one to take the place of the man left behind. Besides, nearly all of you whom I shall not excuse stand a better chance to pick up and get strong again than they would if sent back to hospitals and convalescent camps. Of the great number we sent back to Louisville in March from our Kentucky camp, 37 died in the hospitals there. I will have the guns and knapsacks of the weaker ones carried on the wagons, and put those who give out in the ambulances. You shall sleep in the hospital tent, and the nurses shall cook you as good a supper and breakfast as the hospital supplies can furnish. I have an attack of acute dysentery, and the surgeons around me advise me to go back, as I must take a good deal of risk in going on the field. But there is no other medical officer with the regiment, and if I leave you then you must have a man detailed who does not know you, and can not feel the interest in you which I do. I am too ill to ride my horse, but I will go with you in an ambulance until I can. No one shall go on the march who is not better able than I am." This put a different face upon the conditions.

Only a few were left, and the rest went cheerfully, improved, and were soon on full duty. I had to keep to the ambulance for a few days, but gradually recovered.

The exposure and fatigue of camp life, and still more of a campaign in the field, soon brought on a large and varied crop of diseases. These increased so rapidly as soon to outrun the facilities for caring for them in camp, and still more so when the army was on a march. For this, general hospitals were started in great number. For these hospitals we used, in larger towns and cities, any large buildings available: warehouses, stores, churches, hotels, and school-houses. But the farther south we went, the more desirable it became to use tents exclusively. The patients did better, and the tents could easily be moved when a new location was required. The necessary surgeons and nurses were detailed, or employed among civilians, and necessary supplies furnished from army stores.

These general hospitals were extended to northern cities, where local surgeons were chiefly employed, and to these were sent the sick and wounded of the states where they were located. They were usually barrack hospitals, and better provided to care for those requiring long courses of treatment. In fact, they became so comfortable, both to the patient and the physician—the latter becoming so attached to his patients as to seem unwilling to part with them—that it was found necessary to send a detail of army surgeons to overhaul and shake up these hospitals; and in this way the incurables were discharged, and hundreds of men sent back to their regiments.

After the regiment came the brigade, at first of four regiments. As the regiments became smaller more were added; the last year and a half my brigade had eight. Three brigades made a division—each brigade and division with its surgeon. On the campaign it was a division hospital that was organized. The three brigades probably would have 20 regiments, with 25 medical officers present, the rest being on hospital or other duty. The

theory was to take care of the wounded in common after a battle. But I always endeavored to receive and care for my own men, and, as far as possible, have them brought to my own tents. This was much preferred by the men. The divisions would number six or seven thousand men at the time I speak of.

If a battle was expected, the general location of the hospital was made by the military department. It was intended to be in the rear of the ground on which the division was expected to fight, and beyond the enemy's artillery fire, one and a half or two miles in the rear of our line of battle, and if possible a good supply of water must be at hand. All our tents were set up, dressings, instruments, and tables for dressing and operating prepared, and everything made ready for our work.

Three assistant surgeons and one surgeon were detailed to follow each brigade. They established a temporary depot just out of the reach of the enemy's musketry fire. Here the ambulances stopped. The detailed nurses with stretchers followed immediately behind the line of battle. The wounded men, if able to walk, with the permission of their company officers, hurried back to the temporary depot. Those unable to walk were carried by the nurses on the stretchers. No soldier was permitted to leave the ranks unless to carry the dead and wounded back a few yards. Temporary dressings were applied. Serious operations were only performed in extreme cases. Those unable to walk were taken in the ambulances to the division hospital. There the serious work began, and was continued until the best thing possible in our surroundings was carried out for every man.

The "Medical and Surgical History of the War of the Rebellion," prepared by the Government, gives a list of 47 medical officers killed and 106 wounded while in the service, and says: "The above mortuary record, proportionally larger than that of any other staff corps, should correct the popular fallacy that in time of battle the post of medical officers is one of comparative safety." This record says nothing of the doubtless larger number

who died in the service from disease. A Confederate surgeon informed me that on the field of battle they followed directly behind the troops, and that their surgeons suffered far more than ours.

If our army held the battle-field and there was no military reason for abandoning it, the division hospital often remained for some time and cared for the wounded, sending patients to the rear as they became convalescent and could be safely moved. After the battle of Stone River, December 31, 1862, where our army had 7,000 men wounded in eight hours, I remained 40 days on duty.

The appliances furnished by the Government for surgical injuries, and especially for fractures, were woefully deficient. The only splint for fractures of the femur was that known as Smith's anterior. I had under treatment two of my own men with fractured femur, and two men from other regiments. No one seemed able to use Smith's splint satisfactorily. Remember, this was before the day of making extension by adhesive plaster. I called personally on the medical purveyor at Murfreesborough for apparatus. He responded in promises, which was a currency at greater discount on the field than greenbacks. From the half-inch boards of hard-bread boxes I contrived an inclined plane, portions of bed-quilts from the supplies of the Ladies' Aid Society furnished the padding, and leather from cartridge boxes the material for connecting the parts together. This was supplemented by three or four hours' daily close attention by the surgeon. All the cases but one were compound fractures. In three there was not more than an inch of shortening. The fourth case, an obstinate, ugly rascal who continually loosened the bandages, had much shortening and a bad leg.

If I give some account of my connection with the general field hospital, Department of the Cumberland, as it was organized for the Georgia campaign of 1864, I shall perhaps give some idea of the important part that class of hospitals took in a campaign. I was detailed to this

hospital in May and remained to November — from Resaca to Atlanta.

It had 100 hospital tents 16 x 18 feet, and as many tent flies used as tents, with a thousand cots, a good supply of medicine, cooking arrangements, and a commissary who could procure all reasonable supplies. It was the best arranged and furnished hospital I saw on the field. The medical officers, 12 or 14 in number, were nearly all detailed from regiments, and we were expected to care for 600 or 800 patients. After the battle of Kennesaw Mountain we received 1,500 in one day. Four or five of these tents were set up end to end, the tent flies turned back, and this was a ward, open the whole length, and was assigned to a surgeon. My ward had 70 cots, and at times they were all occupied, but 50 or 60 patients were the usual number. After breakfast in their mess tent, the surgeons went to their wards and, attended by nurses with basins of water and dressings, prescribed for and dressed their patients. If there were cases likely to need an operation, they were carried to an operating tent. Here the surgeons met, consulted, and performed the operations decided upon. Nearly all our 200 capital operations were cases sent back to us from the front, with the hope of saving the limb.

As fast as our patients were thought transportable, and sometimes unavoidably before that, they were sent back to Chattanooga, and thence to Nashville, Louisville, and on north to their own states. As the army moved to the front the wounded and sick must be pushed in the opposite direction, to make room for the recurrent wave of the disabled always moving to the rear.

Every few weeks came an order to move our hospital forward, so as to get nearer to our army, slowly fighting its way down to Atlanta. This made it necessary to send all our patients to the rear at once. At such times we were usually furnished, for our worst cases, two or three passenger cars fitted up as hospital cars, with the cots suspended on rubber rings. The rest must be put in box cars used to bring down army supplies of all kinds.

On the campaign, first dressings were applied and primary operations usually performed at the division hospitals. But after an engagement these hospitals must follow their divisions as they advanced, and be prepared to care for the wounded in the engagements constantly occurring. If the wounded could not be put on trains for Chattanooga in a day or two, they were sent back to our hospital in ambulances. If, as happened repeatedly, two or three hundred came back in one day, for whom they had time to do very little in front, some of their surgeons came with them and remained until they were attended to.

Never before had the wounded of an army received the attention and care given ours. But the immense proportions of the conflict, on so many battle-fields, often made it impossible to give our brave men the prompt and thorough care they had so richly won. And still more helpless we would have been but for the aid given us by that noble band of Northern women, the Ladies' Aid Society. They filled a thousand gaps left by the Medical Purveyor's Department, and gave the surgeons untold help on the field, in the regiments, and in the hospitals.

Such, in brief, was the work of the army surgeon in the early sixties. Viewed in the light of to-day's knowledge, much of it was imperfect, but he did the best he knew, and was more than rewarded for his devotion by the gratitude of the brave men he served.

No one else had the surgeon's opportunity of seeing the real character of the common soldier, to whom let us render our highest praise, our most tender memory, and our undying gratitude, for his unflinching courage and matchless bravery on a thousand battle-fields; and for the even greater heroism with which he endured days and weeks of untold suffering, and, far from home and loved ones, faced the one invincible enemy. At Harvard University is a splendid stained glass window, put up by the class of '61 in memory of their soldier classmates. The inscription below is simple, but who can read unmoved the words, "Through blood to glory."

Abstract.**A STUDY OF THE CAUSES OF DIFFICULT DEFECATION IN INFANTS.***

BY THOS. CHAS. MARTIN, M.D.

Lecturer on Diseases of the Rectum in the Cleveland College of Physicians and Surgeons; Surgeon for Diseases of the Rectum in the Cleveland General Hospital; Member of the American Medical Association, of the Ohio State Medical Society, of the Cuyahoga County Medical Society, and of the Cleveland Medical Society.

This paper is an abstract of an essay which I had the honor to read before the Section for Diseases of Children at the recent Philadelphia meeting of the American Medical Association.

It is generally recognized as a fact that infants and young children strain at stool. The infant and young child strain at stool because of the imperfect development of the anatomic features concerned in the mechanism of defecation. These are:

1. The infant's lower gut is muscularly deficient.
2. Its mobility within the abdomen is obstructive to defecation.
3. The rectal valves are obstructive, and
4. The infant's anus, not being sufficiently expandible, is also obstructive to defecation.

The specimens of infant recta and sigmoid here shown, though now somewhat shrunken by age, as well as by process of preparation, are fairly illustrative of the facts upon which the declarations of this paper are based.

The following are the most important of the memoranda of a few of the autopsies made in this study:

CASE I. Female; still-born; height, 16 inches (40.64 cm.); trans. diam. pelv. outlet $\frac{3}{4}$ inch (1.90 cm.); peritoneum at last vert. of coccyx. (Figs. 3 and 4).

CASE II. Female; age, one hour; height, 17 inches (43.18 cm.); trans. diam. pelv. outlet $\frac{1}{2}$ inch (1.27 cm.); peritoneum at last vert. of coccyx. (Figs. 5 and 6).

*Read February 11, 1898, at a meeting of the Cleveland Medical Society.

CASE III. Male; age, one month; height, 23 inches (58.42 cm.); trans. diam. pelv. outlet $\frac{5}{8}$ inch (1.59 cm.); peritoneum at last vert. of coccyx. (Figs. 7 and 8).

CASE IV. Female; age, six weeks; height, 24 inches (60.96 cm.); trans. diam. pelv. outlet $\frac{5}{8}$ inch (1.59 cm.); peritoneum at last vert. of coccyx. (Figs. 9 and 10).

CASE V. Female; age, two months; height, 20 inches (50.80 cm.); trans. diam. pelv. outlet $\frac{3}{4}$ inch (1.90 cm.); peritoneum at last vert. of coccyx. (Figs. 20 and 21).

CASE VI. Male; age, six months; height, 24 inches (60.96 cm.); trans. diam. pelv. outlet $\frac{3}{4}$ inch (1.90 cm.); peritoneum at last sacral vert. (Fig. 11).

Records of other post-mortem examinations made in this research were taken, but I will not consume time reading them; the measurements read are typical.

1. *Deficiency of Muscular Coat.* Examination of the dried specimens presented for inspection reveals the fact that the muscular coats of the infant rectum and sigmoid flexure are not macroscopically distinguishable, therefore the intrinsic power of peristalsis cannot be present in that degree necessary to it as a component factor of defecation.

2. *Mobility of the Infant Gut.* The relations of the peritoneum to the rectum in the infant (a) contribute to the difficulties of defecation, as also does (b) the relatively great length of the descending colon and sigmoid flexure.

In the child the mesentery of the sigmoid flexure and rectum is disadvantageously long. In young children the length of the sigmoidal mesentery from its attachment to the parietes to its invagination of the lower loop of the sigmoid is often greater than the distance from the promontory of the sacrum to the distal bone of the coccyx. From the sigmoido-rectal juncture to the beginning of the middle third of the rectum the mesentery rapidly shortens, but the peritoneal coat completely invests the upper third of the rectum.

The parietal peritoneum descends over the ischial tuberosities and approaches nearly to the ental sphincter muscle; in the newly born the peritoneum is situated within one-fourth inch (0.63 cm.) of the anal skin.

The disproportionate great length of descending colon and of the mesentery in the infant obviously contributes to the possibility of angulation of the gut.

We may see, therefore, in the presence in the infant of lax and long, or relatively long, peritoneal ligaments, and in the great length of the descending colon and the consequent numerous acute angulations in the infant sigmoid and rectum, and in the mobility of these parts within the abdomen, the possibility of development of a perfect adult mechanism for defecation. The essential features of this development are two: First, the growth of prostate or uterus and their supports, which steady the lower rectum; and second, the down-growth and out-growth of the pelvic bones and the consequent conversion of mesenteric peritoneum to parietal peritoneum, which shortens the adult mesentery and in great measure fixes the rectum; thus the entire rectum is in a great measure steadied to facilitate discharge when the mechanism of defecation is set in operation.

The diagrammatic drawing (Fig. 15) does not exaggerate these obstructive elements. The collateral muscles which assist in the performance of the act of defecation force the feces in the direction of the lower angle of each flexion, and, in that flexion whose onward, or, to be paradoxical, whose downward direction for the time points upward, the auxiliary pressure is in the direction opposite to that of peristalsis.

Inspection of the dried specimens discovers the angulations referred to, which may be expected to be more numerous, the more segmentary the gut's contents.

3. I now desire to direct your attention to a *third feature* obstructive to defecation in infants and young children; this obstructive factor is the *rectal valve*. It is a feature and factor which not only is generally unrecognized, but is one whose very anatomical existence has been most ingeniously and persistently disputed.

The dried specimens here shown prove that the valve is a matter of fact and that its existence is no longer a matter for debate. (See Figs. 20 and 21.) These speci-

mens indicate that the valves are particularly well developed at birth. There are two valves in the so-called ampullar region which are situated so close together that the middle portion of the rectum presents its longest diameter at right angles to the main direction of the gut.

The specimen shown in Fig. 23 is that of an adult, and presents two valves in the left half. The depth of the valve from free border to the border attached is usually from one-third to one-half the transverse diameter of the inflated rectum; the valve is about one inch (2.54 cm.) in depth at its deepest point.

The microscopic section which is here shown was taken from the middle of the lower valve of the adult specimen. The thickened state of the mucous membrane over the free border of the valve fortifies that point against the increased friction which that part must necessarily bear. Beneath it is noticeable *the heavy layer of fibrous tissue*, which gradually diminishes till it is lost at the valve base. Bundles of circular muscular fibres are seen in the middle of the valve. At its base are seen arteries and veins for its special nutrition. *This structural arrangement makes this organ the typical anatomic valve.* The fibrous tissue is the essential element of an anatomic valve. The discovery of the fibrous element in this projection from the rectal wall is a distinct addition to our knowledge. It must be readily seen that the presence in the rectum of *such a structure as an anatomic valve would be essentially obstructive to the passage of feces.*

In studying the physics of the rectum it is important that we recognize that the posterior wall, from the borders of which the peritoneum is reflected, is less movable than other parts in its circumference; hence distention of the rectum not only tends to carry a given point of its wall away from a point opposite to it, but also carries it away from a given point cephalad or caudad. So it may be assumed that, if the two valves situated at the ampullar middle are three-eighths of an inch (0.95 cm.) separated, and that the two opposite walls of the rectum in the portion bounded by these valves are one inch (2.54 cm.)

apart, that in a state of the gut's collapse, or systole, which brings the opposite rectal walls into contact, *the valves also would be brought into contact, and thus afford a very definite obstruction to the descent of solid or semi-solid feces.*

4. *Inexpansibility of Infant Anus.* The pelvic outlet in the infant is so contracted that the limits of anal expansion are such as almost to defeat the passage through it of other than fluid feces. It is remembered that the normal average measurement from ischial tuberosity to ischial tuberosity in the adult is about four inches (10.16 cm.), and it is a fact proven by our observation that the average transverse diameter of the newly born infant's pelvic outlet is but a little more than one-half inch (1.27 cm.) Those of us who are familiar with instrumental divulsion of the adult anus have observed that two and a quarter inches (6.35 cm.) is the average limit of lateral forcible (not functional) separation of the anus, the remaining portion of the bony outlet being filled with the compressed soft tissues of the ischiorectal fossæ. Therefore it may be estimated that nine-sixteenths, *at most*, of the diameter of the pelvic outlet must be the absolute limit of functional expansibility of the anus for the passage of feces. Applying this calculation to the infant, we find that if the ischial tuberosities are one-half inch (1.27 cm.) separated, that the anal expansibility is but five-sixteenths of an inch (0.79 cm.), which is, as we know, the diameter of a No. 22 (French scale) sound. Reference to the paraffin cast of the infant gut indicates that the average distensibility of the sigmoid flexure and rectal chambers, in which the feces when firm are formed, is four or five times that of the anal expansibility. Thus it is readily perceived that, compared to the adult, *the juxtaposition of the ischial tuberosities in the infant supplies a most obstructive factor in defecation.*

To collate in brief:

1. The muscular development of the adult rectum and lower sigmoid is plainly apparent. A deficient muscularity is observed in the infant specimens.

2. The meso-peritoneum of these parts in the adult is observed to be, relatively, very considerably shorter than that in the infant. The adult gut is slightly tortuous; that of the infant much angulated.

3. The rectal valve appears to bear the same proportion to the gut in both adult and infant, but when we remember the difference in muscular development in the two the disproportionate great resistance of the valve in the infant rectum is obvious.

4. The anal expansibility is remembered as adequate in the adult and is seen to be deficient in the infant.

Co-relative to the facts just stated we must recognize that the adult rectum has resident within its own wall a powerful expulsive muscular mechanism; that in the adult the shortening of the mesentery holds the upper rectum steady under the applied auxiliary forces; that in the adult the curves of the sigmoid are not necessarily obstructive, though in a desirable measure retardative; that in the adult the forward incline of the lower sacrum and coccyx behind and the development of the uterus and prostate and their inherent supports in front provide the adult lower rectum with a firm funnel-like arrangement which guides the feces directly upon the os internum of the anus, that the valves may divide the feces into portions to facilitate their separate successive discharge, and finally, in sequence, that the physiologic descent of the entire pelvic floor reduces this last possible resistance to the minimum in adult defecation.

Infantile straining at stool, the ruptures and prolapses, constipation, retention of feces, and their multitudinous consequent ills require our consideration; and this study forces the conclusion, I believe, that the individual's escape is ultimately assured by process of development, but that, *for the normally formed infant, the physician will find the solution of the problem of difficult defecation in the solution of the stool.*

EXPLANATION OF PLATES.

Figs. 1 and 2. Recta of adults. Muscular bands are seen to be well developed. Filled in the procto-colnoscopic posture.

Figs. 3 and 4. Front and side views of rectum of an infant, still-born; muscular coat undeveloped. Filled from below. Fig. 4 shows antero-posterior angulation at third sacral vertebra.

Figs. 5 and 6. Front and side views of rectum of infant aged one hour. Autopsy while in a state of rigor mortis. Rectum nearly perpendicular, and sigmoid almost tied in a knot. Filled from below.

Figs. 7 and 8. Front and side views of rectum of infant aged one month; autopsy while in a state of rigor mortis. Filled from below. Two-thirds life size.

Figs. 9 and 10. Front and side views of rectum of an infant aged six weeks. Filled from below.

Figs. 11. Front view of rectum of an infant aged six months. Filled from above after disappearance of rigor mortis. Two-thirds life-size.

Figs. 12, 13, and 14. Front and side (left and right) views of rectum of infant aged six months. Filled from above after disappearance of rigor mortis. Fig. 13 shows fairly well the mesentery from sacrum and coccyx to rectum, but shorter than in the fresh state, alcohol immersion, varnishing, and drying having shrunk it. Observe also how nearly the peritoneum approaches to the anus.

Fig. 15. Diagrammatic representation of same gut in the empty state, the flexions, therefore, not being the same as shown in the photographs. In the partly filled state, which is the condition at about the time of defecation, the flexions and positions of these parts would be intermediate to those of the filled and empty conditions. (The dotted lines indicate positions of valves.)

Figs. 16 and 17. Diagrammatic, showing directions of forces and resistances in defecation, in infant and adult respectively.

Fig. 18. Photograph of a female cadaver showing, after laparo-symphiseotomy and removal of bladder, uterus, and adnexa, the upper rectum and sigmoid packed with scybala; *s*, *s*, symphysis pubis; *l a*, ligature at anus. The shorter mesentery of the adult, perhaps, keeps the greater portion of the sigmoid flexure above the ileo-pectineal line, that it may not escape the auxiliary forces of defecation. It is noticed that the sigmoid is more than normally distended. One-quarter life-size.

Fig. 19. The rectum shown in Fig. 18 divided into anterior and posterior halves. *Amp*, anal end of ampulla; *s, s*, sigmoido-rectal communication; *xx, x'x'*, a semi-lunar valve dividing the middle and upper portions of the rectum; *m*, the beginning of a semi-lunar valve on the right of the posterior wall, and *m'm'*, the same valve continued on the anterior wall; *h h*, a small valve, not prominent because of the empty state of the gut at this point; *b b'*, sigmoido-rectal valve; *n*, a portion of mesentery. One-half life-size.

Figs. 20 and 21. Interior view of anterior and posterior halves, respectively, of rectum and sigmoid of an infant aged two months. Portions of two valves are noticed at the middle part. In Fig. 21 the sigmoid is out of focus.

Fig. 22. The paraffin cast removed from the gut pictured in Figs. 20 and 21.

Fig. 23. Interior view of the left half of the rectum of an adult. Filled in the procto-colnoscopic posture, and distended only to the degree of normal atmospheric inflation. The anus is at the left of the picture. The valves are respectively two and one-half and seven inches from the anus. One-half life-size.

Fig. 24. Semi-lunar valve from specimen shown in Fig. 23, magnified fifteen diameters. *A*, mucous membrane; *B*, fibrous tissue; *C*, bundles of circular muscular fibres; *D*, vein; *E*, artery; *F*, vein; *G*, artery; *H*, areolar and adipose tissue.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.



FIG. 9.



FIG. 10.



FIG. 11.



FIG. 12.



FIG. 13.



FIG. 14.

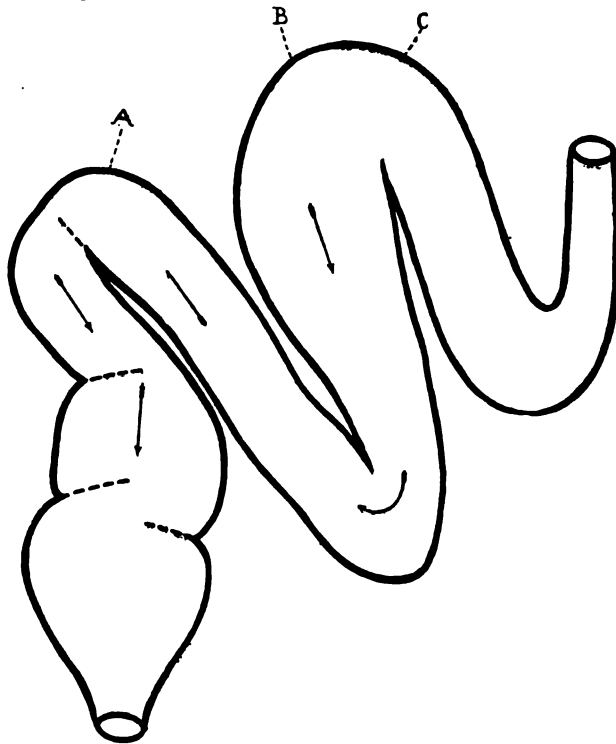


FIG. 15.

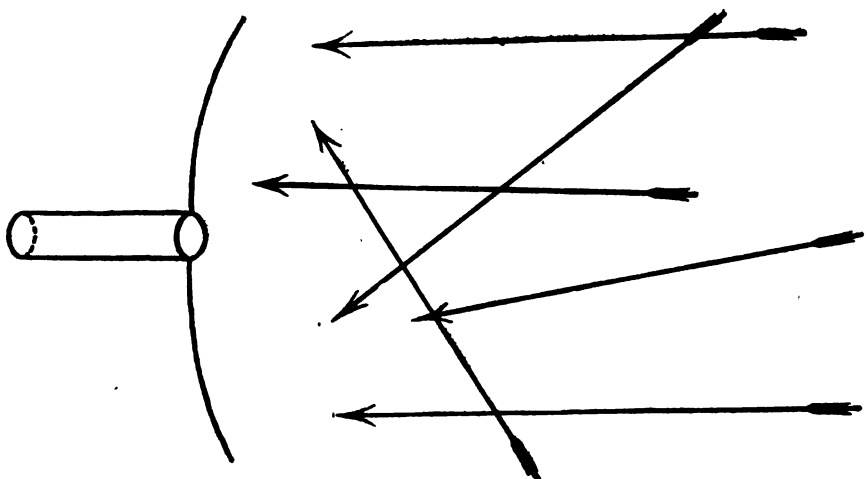


FIG. 16.

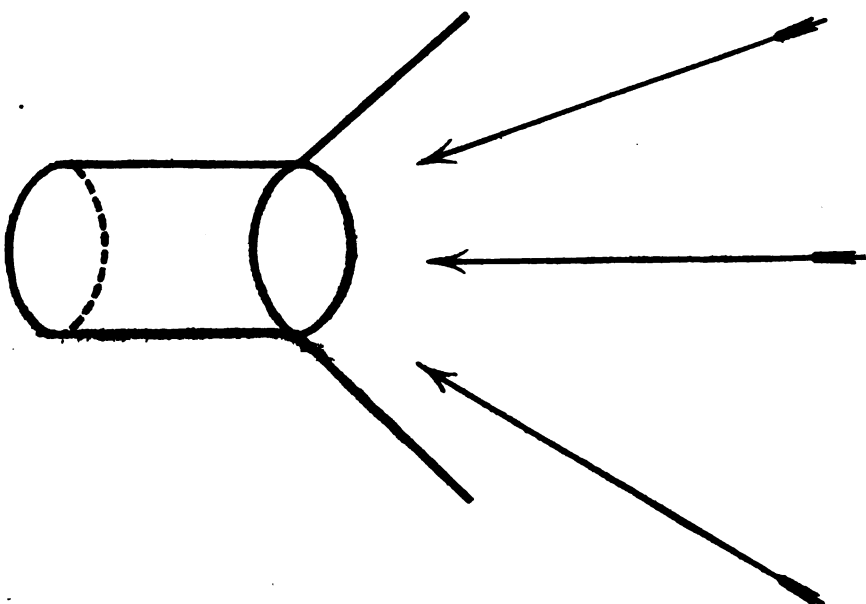


FIG. 17.



FIG. 18.



FIG. 19.



FIG. 20.



FIG. 21.



FIG. 22.

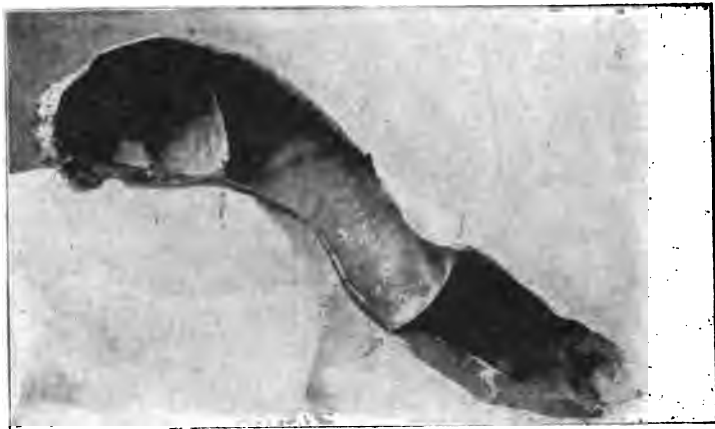


FIG. 23.



FIG. 24.

THE Cleveland Medical Gazette

ESTABLISHED 1885.

SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

COLLABORATORS:

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Editorial.

CONCERNING FEE BILLS.

Some doctors do not believe in having a regular schedule of fees, and others think it useless to adopt a fee bill because certain practitioners will be sure to cut prices anyway. The same differences of opinion appear when the matter is discussed in medical societies, and some societies have, after discussing the matter, failed to adopt a fee bill. For instance, the Academy of Medicine of Cincinnati has "never thought it advisable to adopt a fee bill, leaving the business portion to individual members, who charge as they believe their services are worth."

The Muskingum Co. Medical Society once discussed the subject, a proposed fee bill having been presented for adoption, but it failed to pass.

As a rule, the medical societies of national scope have never adopted fee bills, and it seems improbable that one could be found suitable alike to all parts of the country. Neither the American Medical Association nor the American Academy of Medicine has a fee bill, and the state societies have for the most part left the subject untouched. The larger societies of combinations of states, for instance the Mississippi Valley Medical Association, have never adopted fee bills, nor has the Medical Society of the Missouri Valley.

The societies of specialists have not usually discussed nor adopted a schedule of charges. The American Dermatological Association, the American Laryngological Association, the American Electro-Therapeutic Association, the American Gynecological Association, the American Association of Obstetricians and Gynecologists, the American Neurological Association, the American Association of Genito-Urinary Surgeons, and the American Orthopedic Association, have none of them adopted a fee bill. The attitude and, probably, the practice of the specialists is well expressed in the following letter from the secretary of the American Orthopedic Association:

Editor Cleveland Medical Gazette:

DEAR DOCTOR:—I have your esteemed favor of March 23rd, and beg to say that the American Orthopedic Association has never adopted a fee bill or schedule of charges for medical services. Indeed, I should not think it possible for them to do so, inasmuch as in the large cities, like New York and Philadelphia, obviously the younger men cannot charge as much as the older men like Dr. Sayre and Dr. Willard. In the same way, it is not possible for a man practising in one of the Western towns to charge as much as do the Eastern men. Possibly the best advice one could give to a doctor would be, "temper the winds to the shorn lamb," but be sure and shear the lamb.

Yours truly,

JOHN RIDLON.

More than a year ago, when the insurance companies attempted to cut down the fees for medical examinations, the question was discussed in various medical societies, and the Pacific Coast Association of Insurance Examiners, and also the Portland Medical Society, and probably others, passed resolutions refusing to accept a reduction (less

than \$5) for the usual old-line examination where urine analysis was required.

Coming now to the State of Ohio, which more nearly interests us, we find that the state society had once a fee bill many years ago, but it is now regarded as obsolete. Of the so-called district societies which represent a portion of a state or a combination of several counties, we find that the North Central Ohio Medical Society and the Union Medical Society (of Columbiana and adjoining counties) have each their list of prices for professional services, while the Northeastern Ohio, the Eastern Ohio, and the Northern Ohio district medical societies have no such guide for their members. Of the county societies, Hancock, Lake, Tuscarawas, Delaware, Mahoning, we are certain have fee bills in existence, while Portage and possibly all the others have not. Holmes County once had a fee bill, tradition saith, but its memory only lingers indistinctly in the minds of the oldest practitioners.

We had some dim ideas concerning a fee bill once adopted by the Cuyahoga County Medical Society, but the secretary has no record of it, nor can any of the elders or the deacons, either, give any information concerning such a document. Probably we only recalled some discussion which should have led to the adoption of a fee bill, but did not. The Cleveland Medical Society has never adopted a fee bill, although some members have expressed a wish that one might be agreed upon and adopted.

We think it is certainly within the province of the County or the Cleveland Medical Society to arrange a schedule of prices, and eminently proper that they should do so. While it cannot be expected that all members will in every instance adhere to the schedule fee, it can be required in all cases where there is not good reason for departing from the uniform scale. The adoption of a uniform scale of charges by a medical society tends to render charges more uniform throughout the city and county, discountenances "cutting," makes it easier to collect a proper fee in case of dispute, and is a convenience to the younger men not yet familiar with the more

unusual services they are occasionally called upon to perform. We have taken up the subject and expect to show that there is too little uniformity in charges, that the average fees, particularly in general practice, are too low, that there is entirely too much "cutting" of prices, and that too much work is done for no fee at all; all of which not only work great detriment to the dignity and social standing of the profession, but largely increase the hardships of practice and lessen the medical income.

FAME AND THE MEDICAL EDITOR.

A recent editorial in the *Philadelphia Medical Journal*, under the heading "Newspaper Fame," is well worthy of a reading; and we think the subject will bear some further discussion.

"We were curious to see what impression might have been made upon the newspaper world by the death of Mr. Ernest Hart, of London, and we therefore bought half a dozen or more of the representative newspapers of New York and Philadelphia of last Saturday and Sunday.

"They were found to have an uncountable and unaccountable number of pages of vile advertisements of 'patent' medicines (not one of which is patented), dreary stupidities of 'funny' columns, wastes of 'society' news that pertained only to an insignificant and silly part of society, page after page of the doings of political bosses and criminals public and private, with gossip, scandal, and pseudo-science—all as limitless as it is nauseous. But not a line of Hart, except a mere word or two in a couple of dailies, and one excellent short account of Hart's life and work in a New York evening paper that is scorned by all 'the powerful forces that influence the modern world.' The cabled letters from London did not allude to the fact, showing also how little that great city knew or cared. And yet Hart was a man that had instituted and realized a great number of sanitary reforms, had profoundly influenced most of the hygienic legislations of a generation in the world's greatest nation, and had unified

the medical profession of this nation into an organic agency of untold benefit to humanity; in a word, one who had saved and prolonged numberless lives and bettered their condition in a vast number of ways. What a comment is all this upon the blindness of the world to the real elements and agents of our progress!"

If we mistake not, our esteemed contemporary could easily have expanded his half column into a whole chapter of "Borderland" size; for there is food for thought in the theme. Ernest Hart expected nothing different. Himself has said: "Editorial work, like all other good work, is largely one of self-sacrifice. It is the grave of literary reputations and the despair of literary ambition. . . . St. Beuve has left a monument of literary criticism, but not, it is to be feared, 'more lasting than brass;' but Delane, wise and great editor as he was, the brilliant Fonblanque, Hutton, philosopher and moralist, have but written, I fear, their names in sand, and that is the common lot of all journalists, as such. In their works they shall live, but their names, hardly known even in their own day, shall speedily be forgotten. That is at once their glory and the penalty in which they must rejoice. Their influence, far-spreading and enduring; their unseen power in the shaping of events, is the reward of their self-effacement." Even a man like Mr. Hart, of large intellectual endowment, with a keen perception of right and wrong, and the courage of his convictions; a profound student of general and professional sociology, and a shrewd judge of individual capacities and motives; possessed of a faculty for organization, and an insatiable love for work; immovable when entrenched in a position, yet capable of great magnanimity; lofty in his own ideals, yet sympathetic in his nature and democratic in his principles; an astute critic and a forceful writer; with all these qualities of greatness, he was in life, one may say, comparatively unknown — a score of names of lesser men, physicians, surgeons, spring to the mind of every reader as more familiar than that of Ernest Hart. And his death was scarcely more than chronicled in meager fact.

From the very nature of their work there are few editors who meet any other fate. Nor need they expect it. So far from being in the eye of the general public, their work is scarcely appreciated even by the profession. Do you doubt the statement? Let me put a test question. Take, for example, the names of George M. Gould, whose editorial we have quoted, or J. Duncan Emmett, of the *Gynecological and Obstetrical Journal*. Not that we wish to compare these invidiously with many another worthy medical editor, but because they serve to illustrate the point. How many readers of medical literature have taken time to consider what these men have done and are doing to promote coöperation among physicians in the production and publication of medical literature? Have you ever studied the full import of this question, and have you given to men who have championed the principle involved due honor for the stand they have taken, and for their unselfish work upon this matter alone?

We suspect that the ordinary reader of a journal does not realize the strain of even the ordinary task of the editor. Many an able writer has abandoned editorial work simply because of the great drain on cerebral gray matter required to do a certain amount of work against a certain time, as is necessary in the exacting and unending task of the journalist. Take, for example (there are many, but a better one does not occur to mind at this moment), Thomas Nelson Page, the Virginia novelist. He was engaged to write for the Editor's Drawer of *Harper's*, but it so wore upon him and worried him that he gave it up. He has written many books excellent in their line, but he could not work in that unremitting way, satisfying the relentless demands of a periodical.

As to the lay newspapers, there are particular reasons why they are not apt to herald the fame of the medical editor. For one reason the latter has not about him the elements of sensationalism which make a good hero for the modern newspaper. He does not indulge in scandal and fight duels over it, *à la française*. He does not make miraculous new discoveries, like a Surgeon or a

Brown-Sequard. Nor are his efforts as editor — although as useful as any performed by his brethren for the profession and for humanity — directed toward great operations or improvements, like those of a Laennec or a Senn. The editor's work is done silently, almost namelessly, and in a hundred efforts often as scattered as the drops of a summer shower — as hard to trace individually, yet in their ultimate effects as beneficent.

Another reason why newspaper fame comes not to the medical editor is because, when he is true to himself and his profession, he so often has been obliged to arraign the papers for pandering to quackery by opposing proper medical legislation, and by advertising nostrums and charlatans. For his vigilant and fearless faithfulness to his profession and to the best interests of humanity the medical editor as such is usually sedulously ignored by those "powerful forces that influence the modern world."

But let any who had hoped through medical journalism to acquire fame find comfort in pondering these lines of Schiller's:

"What shall I do, lest life in silence pass?
And if it do,
And thou shouldst never prompt the bray of noisy brass,
What need'st thou rue!
Remember that the ocean deeps are mute,
The shallows roar.
Worth is the ocean, fame is but the bruit
Along the shore."

THE PLAN OF ORGANIZATION OF THE NEW LAKESIDE HOSPITAL.

The reception of patients in the out-door department and in the wards of the Hospital began on Monday, Jan. 17. The hospital has been thoroughly equipped and is fitted with all modern improvements, so that the sick may be cared for according to the best methods of modern medicine. There are ten wards, two in each building.

Those assigned to the female patients are on the second floor, those to be occupied by the men being on the first floor. Each ward supplies ample accommodations for 20 patients and has near by additional small rooms for such cases as may for various reasons require isolation.

There are 56 private rooms reserved for the reception of patients who are able to pay for their treatment. Such patients may be sent to the hospital by any physician of good standing in the city or state, who will still have the privilege of retaining the full supervision of them. In this connection a special operating room has been provided for private cases under the charge of surgeons not connected with the staff of the hospital.

The Visiting Staff of the hospital is made up of the following physicians: Medicine, Dr. J. H. Lowman, Dr. H. H. Powell, Dr. H. S. Upson; Surgery, Dr. Allen; Diseases of Children, Dr. Cushing; Gynecology, Dr. Robb; Neurology, Dr. H. S. Upson; Ophthalmology, Dr. Millikin; Genito-Urinary Diseases and Dermatology, Dr. Corlett; Pathology and Bacteriology, Dr. Howard.

The out-patient service is under the control of the heads of the departments represented in the visiting staff, who have associated with them the following gentlemen: Medicine, Dr. C. F. Hoover and Dr. W. G. Wagner; Surgery, Dr. W. H. Nevison and Dr. H. A. Becker; Diseases of Children, Dr. F. S. Clark; Neurology, Dr. H. L. Spence; Gynecology, Dr. Walter R. Lincoln and Dr. W. E. Hendry; Diseases of the Throat, Nose, and Ear, Dr. Wm. R. Lincoln, Dr. J. M. Ingersoll, and Dr. Robert E. Ruedy; Ophthalmology, Drs. Wm. E. Bruner and C. C. Stuart; Dermatology and Genito-Urinary Diseases, Drs. J. S. Windisch and G. Seeley Smith.

The Resident Staff consists of the following:

Medicine—

Resident Physician, Dr. Edward P. Carter.
First Assistant, Dr. N. A. Haning.
Second Assistant, Dr. Chas. E. Held.
Externe, Dr. E. H. Season.

Surgery—

Resident Surgeon, Dr. Wm. E. Wheatley.

First Assistant, Dr. G. G. Bowman.

Second Assistant, Dr. C. O. Hain.

Externe, Dr. W. F. Doolittle.

Gynecology—

Resident Gynecologist, Dr. Wm. H. Weir.

First Assistant, Dr. O. H. Warner.

Second Assistant, Dr. Robert H. Sunkle.

Externe, Dr. G. T. Goodman.

The administrative part of the hospital will be under the control of the Superintendent, Mr. James S. Knowles, of New York City, who has had a large experience in hospital work. The Steward is Mr. Wall. Miss McMillan, late Superintendent of the Kingston General Hospital, Canada, School for Nurses, is the Principal of the Training School. Miss Martin, of the Montreal General Hospital, will fulfill the duties of matron.

With the opening of the Lakeside Hospital, the sick not only of the city but of the state have had provided for them a place where they can receive the best of care, and where cases which are of such a nature as to render treatment at home very difficult or quite impossible, may be put under circumstances most favorable for recovery. In order that each special form of disease may receive the best attention and the most skilfull treatment possible, the various classes of diseases will be assigned to their proper departments, each of which has one or more visiting physicians and a full house staff, some of whom will always be available at all times of the year. The staff has purposely been made sufficiently large to insure that each case shall have the careful attention of a physician who has had special experience in this class of disease. This provision, together with that of a corps of well-trained nurses, should place the patient in the best possible condition for recovery, and at the same time will contribute much to his comfort while under treatment.

The proper care of the sick is a duty the thorough carrying out of which must always be of the greatest pos-

sible advantage to every community. It is to be hoped that this generous undertaking of the trustees of the hospital will receive the hearty support, both moral and financial, of the citizens and of the members of the medical profession, not only of Cleveland and the neighboring districts, but also of the State of Ohio at large, which is invited to share in the advantages offered by the Lakeside Hospital.

ROBB.

BLACKLIST THE DEAD BEATS.

Under "Correspondence" will be found an interesting and suggestive letter from Dr. Wm. Clark, of this city. His experience has been that of many another physician; in fact, is the common experience of the profession in city practice. The nuisance of the "dead beats" has grown to such proportions that something should be done to abate it. We have devised a plan which we think will meet the approval of the profession and effect practical results in this direction. We propose, with the coöperation of our subscribers, to furnish them with a "Black-list." Coöperation can correct this, as it could so many other evils afflicting the profession.

Now, let every physician who has been imposed upon by those who secure medical services without paying for them join in this mutually helpful plan of protecting ourselves against fraud, and of compelling people to be honest.

Each physician is to send to THE GAZETTE his list of known "beats," and in every instance the following particulars should be given, in tabular form:

Name of delinquent; occupation; address; from..... to.....(time of the service); am't due.

These lists sent in by various physicians practising in Cleveland (and suburbs) will be collated and published as "THE CLEVELAND MEDICAL GAZETTE'S Black-list," which will show, alphabetically arranged, all the names furnished, together with the other particulars, and the name of the doctor who furnished them. This list will be published monthly or quarterly, or at such intervals

as the amount of material furnished may justify. A copy of the list will be furnished to every paid-up subscriber of THE GAZETTE without any "membership fee," at the actual first cost of printing the list, *provided the physician has sent in his list of dead beats* to help us to make the complete list. So that if the physicians of this city are really in earnest in their desire to rid themselves of this thankless vampire which robs them of so much time and strength, now is their time to do so. They are not asked for a fee in advance to any chimerical concern, nor for any promised book; nor to pay for anybody's services. All we ask is to have the lists sent to this office, and we will "do the rest."

Dr. Clark has kindly consented to aid us in this work.

Among Our Exchanges.

The question, "What kind of a fever is it, Doctor?" puzzles the best of us at times—indeed, it puzzles the more careful of us oftener than it does those who are content with snap diagnoses. We look the patient over for the evidences of typhoid, and we find no prodromata, flat abdomen, no iliac tenderness, no gurgling, constipation. Questioning for malaria we find no chill, no remissions, no plasmodia; and when the anxious friends inquire, "What kind of a fever has he got, Doctor?" we are sore put to it for an answer. And then comes the consciousness of a long-felt want—the want of a term that shall cover our uncertainty with an appearance of exactness and satisfy the waiting friends with a term that they can communicate to the sympathetic ears of inquiring friends. We all have felt the want, but it takes the inspiration of genius to supply it. Now it looks as though it were indeed supplied. DR. CHAS. H. HARRIS, of Cedartown, Ga., calls it *atypical fever*. He maintains¹ that there is a third fever distinct from typhoid, distinct from malarial, with a clinical history all its own, sometimes mild, sometimes so virulent as to carry off the majority of all who come down with it. It has been called all sorts of names—camp fever, Chickahominy fever, gastric fever, typho-malarial fever, and the like; and, what is apt to lead us astray, it occurs not only in epidemics of its own,

¹ *Med. Brief*, Jan., 1898.

but during epidemics of typhoid and malarial fevers. During an epidemic of the former the doctor thinks that his dose of calomel, which, by the way, does not purge so heavily as in typhoid, has aborted a typhoid fever. Should it occur along with an epidemic of genuine malarial fever, and should the doctor pour in his calomel and quinin in regulation style, his patient may surprise him in a week, more or less, by the sudden development of fatal intestinal hemorrhage. Unlike typhoid, one attack gives no immunity from a second. The clinical picture of the three fevers Dr. Harris compares as follows:

TYPHOID FEVER.	ATYPICAL FEVER.	MALARIAL FEVER.
Incubation for days or weeks. Malaise and prodromata.	Accession abrupt; no prodromata; no chill.	Accession,— abrupt; chill.
Abdomen tympanitic; iliac tenderness and gurgling.	Abdomen flat; no tympanites, no gurgling, no iliac tenderness marked, but there may be a slight general tenderness over abdomen.	Abdomen a little tumid; no special tenderness.
Diarrhea.	Constipation.	Neither diarrhea nor constipation.
Tongue coated with white fur; slight redness about edges; marked fibrillar trembling.	Tongue coated yellow or brown; no redness or fibrillar trembling.	Tongue thickly coated with yellow fur; no redness or trembling.
Superficial heat uniform.	Extremities cool; abdomen hot.	Surface uniformly hot.
First day, temperature 99°-101°; pulse, 100.	First day, temperature 103°-105°, pulse, 120.	First day, temperature 104°-106°; pulse, 98-120.
Remissions light; nosebleed common.	Nosebleed, rare.	Remissions and intermissions marked; hemorrhages very rare. Nosebleed rare.
Traces of albumin in urine.	Urine scant; no albumin.	
Mind apathetic; delirium; intestinal hemorrhage in third week and after convalescence begins. Course and duration typical.	Mind clear, often to the last; intestinal hemorrhage early in the first of the second week, or any time thereafter. Course and duration very variable, often aborted. May recur every year.	Mind confused; anxious. Later, delirium. Course and duration variable. One attack predisposes to another.

The method of treatment which the doctor has found most efficacious is: First, to allay nervous irritability and pain with small doses of opium; then give a calomel purge — 10 grains with one-half grain of ipecac and five grains of soda — followed, if necessary, in six hours with castor oil and turpentine, and enemata of warm water till two or three stools have been obtained. After this no purgatives should be given, but the bowels should be cleared every other day with enemata of warm water. After the purge the small doses of opium are resumed and, after the fourth or fifth day, quinin — not to exceed one grain every three hours — is added. When the fever begins to decline, add hydrastis and strychnin. Phenacetin or antipyrin may be cautiously used if the fever runs over 104°, or the head and extremities may be sponged with cold water. The entire abdomen should be covered with a hot flaxseed poultice, changed about every six hours from the first till the fever has subsided. Cold applications are likely to prove fatal. If hemorrhage occurs, increase the opium, apply the poultice hotter, and sprinkle it with mustard, etc. Meats or meat broths, or eggs, or any article of food containing lard or grease is ill borne and likely to cause relapse. It will take time to prove whether the doctor's careful bedside observations have added a new disease to our nosology, but the term "atypical fever" is a handy one, whose convenience may find for it a larger use as time goes on.

In the avalanche of new remedies with which the profession is overwhelmed, and whose merits are brought forcibly to our attention by the ever-alert pharmaceutical drummer, we are only too apt to let go of a simpler and better remedy. Some such fate seems to have overtaken manganese, whose employment in menstrual disorders by RINGER and MURRELL, of London, was followed very considerably by the profession at large, and with excellent results in a large number of cases. DR. CHAS. O'DONOVAN, of Baltimore, who has carefully studied the drug for years, strongly advocates the more general use of manganese, preferably the black oxid, in the therapeutics of *dysmenorrhea*.² While its good effect is not always experienced immediately, a continuous trial of say three months is often followed by the most gratifying results, and it in no way interferes with the administration of iron or vegetable tonics where such are indicated. The cases where DR. O'DONOVAN has experienced the best results are those

² *Med. News*, Nov. 27, '97.

marked by general malaise preceding the flow, with some pain growing rapidly worse as the flow is about to begin, and remaining more or less severe during the first day. He cites in detail a number of cases illustrative of the beneficial effect of the drug, and so confident is he in its efficiency that he does not feel called upon to subject unmarried women complaining of dysmenorrhea to digital or instrumental examination until the ailment has resisted a three-months' course of manganese. He begins with one grain three times a day, increasing to three grains at a dose as the patient acquires tolerance. In cases of *uremia*, where prompt action is desirable and where, owing to cardiac weakness, the pilocarpin sweat is contraindicated, PROF. H. A. HARE,³ of Philadelphia, has used and recommends the use of intra-venous injections of normal salt solution. In one case of complete suppression of urine for 16 hours, dyspnea, twitching of facial muscles, and dropping off into unconsciousness whenever left undisturbed, one quart of normal salt solution injected into a vein of the forearm was followed by free perspiration and the secretion of some 13 ounces of urine in a few hours, and by prompt amelioration of the other symptoms. In preparing a dietary for our *diabetics*, we should not overlook the high value of nuts as food.⁴ True, they are somewhat indigestible in the raw state, but they lend themselves to the culinary art as well as other raw materials, and little as we are accustomed to think it, they rank much higher in proteids than beef, and higher in fats than any other class of foods, while they are relatively free from starch and allied substances. In fact, the total nutritive value of a pound of nuts is more than three times that of the best beefsteak; and among them the peanut stands highest in proteids (28.3%) and lowest in starchy compounds (1.8%); so that nuts at forty-five cents a pound are cheaper than beef at fifteen, considering the amount of nutriment actually furnished. As an exclusive meat-diet is apt to get so monotonous that the patient is more damaged by the disgust than the restriction in diet does him good, nuts will serve to furnish a salutary food material, as well as an agreeable variation of that insufferable sameness which not infrequently produces such a degree of anorexia as to compel the discontinuance of an exclusively anti-diabetic diet. Of especial practical interest to the profession are the experiments of PROF. H. A. HARE on stimulation of the gastric

³ *Med. News*, Dec. 4, '97.

⁴ *Modern Medicine*, Nov., '97.

mucous membrane as an aid in the absorption of drugs.⁵ It has been the habit of the profession to combine capsicum or aromatics with many stomachic tonics, and, clinically, the results have seemed satisfactory. Now, DR. HARE has shown that there is more than mere seeming in this, for when capsicum is given in connection with iodid of potash the latter appears in the saliva from six to ten minutes earlier than when given alone, the local stimulation evidently promoting the assimilation of the drug very materially. This fact we do well to bear in mind when desirous of prompt action of important drugs in critical cases. When your patient with *delirium tremens* shows no response to chloral or morphin, DR. LETTULE⁶ recommends the cold bath at 65° F., immersing the patient to the shoulders and pouring the water over his head. For the first few minutes cyanosis and excitement may increase, but in from six to twelve minutes the patient becomes rational and quiet. Recurring excitement calls for a repetition of the bath.

New Books.

THE TREATMENT OF DISEASE BY ELECTRIC CURRENTS. A Handbook of Plain Instructions for the General Practitioner. By S. H. Monell, M. D., Founder and Chief Instructor in the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics and Roentgen Photography; Fellow of the New York Academy of Medicine. Illustrated. 1,100 pages. New York: William Beverley Harison, 1897. Cloth, \$7.50.

We have before us the second large volume which Dr. Monell's facile pen has put forth, within a comparatively short period, in the interest of rational and scientific electro-therapeutics. The opening chapters on the subject in general, definitions, and fundamentals, are followed by those on the apparatus, action, and management of galvanic currents. The chapters on faradic electricity indicate the necessity for large and perfectly constructed coils and interrupters, and explain in sufficient detail their construction and manipulation. The small coil popularly used is worse than utterly useless, as it is likely to inculcate a disbelief in the efficiency of the faradic current, and prevent recourse to the more perfect apparatus. Several following chapters, together with occasional paragraphs in other parts of the book, are mainly bor-

rowed from the author's work on static electricity, but will nevertheless be new and of value to one not possessed of the latter. The chapter on electro-diagnosis sweeps away, as with a refreshing breeze, the maze of refinement in observation and expression of electric reactions, and location of motor points, which at one time was supposed to be essential to an understanding and effective application of electricity in medicine. The remainder of the book, comprising by far the greater part, takes up the detailed consideration of electric currents in the various conditions to which they are appropriate. The subject of gynecological electro-therapeutics occupies over 300 pages, and is followed by genito-urinary conditions in the male, and rectal disorders. A chapter on special electro-therapeutic methods includes the electric light, sinusoidal currents, which the author regards as not equal to the improved and complete induction coil apparatus, cataphoresis and metallic electrolysis, and electric baths. In connection with the last topic, he says: "There has been much discussion, pro and con, about the merits of electric baths, but criticism has been leveled, for the most part, at the tub water-bath into which a couple of electrodes are often dropped for revenue only." He considers the most useful form of electric bath to be the cabinet in which dry or moist heat or medicated vapors may be applied, together with the electric currents indicated, which are applied just as outside the bath. A considerable portion of the book is devoted to electric treatment in various functional and organic nervous disorders, and in a number of those affections in which pain is the predominant or only known factor. Electrical treatment of eye, ear, nose, throat, and in a number of previously unmentioned conditions closes the volume.

Dr. Monell has given us a book that is eminently practical as a guide to the student of electro-therapy. It is based very largely on his own work and experience, and is to a high degree common sense, not only in practice but in theory; that is, it is truly scientific in that it rests therapeutic principles on the at present well-known laws of electric constants, and the varieties of action on tissues. The present volume is complementary to the author's work on static electricity, and the two form the most complete and practical exposition at present existing of the subject of electro-therapeutics.

F. K. S.

DISEASES OF THE STOMACH. Their Special Pathology, Diagnosis, and Treatment. By John C. Hemmeter, M. B., M. D., Ph. D., Clinical Professor of Medicine at the Baltimore Medical College; Consultant to the Maryland General Hospital, etc. With many original illustrations, a number in colors. 788 pages. Philadelphia: P. Blakiston, Son & Co., 1897. Cloth, \$6.

The subject of stomach diseases is rapidly acquiring a literature all its own. The constantly increasing mass of information on the subject and refinement in the differentiation of pathological conditions, and the accumulation of diagnostic and therapeutic procedures, render a large volume necessary to cover the subject. While these same conditions have led to a limitation of their work to this subject on the part of some men, the stomach cannot become the field of special practice, but must largely remain in the hands of those in general medicine. With this idea in view, Dr. Hemmeter has written his book for the general practitioner, and has emphasized those methods generally available rather than those calling for a refined technic.

Of the three parts into which the volume is divided, the first includes anatomy, histology and physiology, and methods of examination. The use of the intragastric bag with three compartments, made of thin rubber, for demonstrating the size and movements of the stomach, is original with the author and is a decidedly ingenious method of securing a graphic record. It is given in rather full detail, but would seem to be useful to the investigator rather than in usual practice, although used regularly by Dr. Hemmeter in hospital work. Considerable attention is given to gastroscopy.

In the second part of the book are taken up methods of treatment in general, and the materia medica. Among the most valuable chapters in this portion are those on dietetic treatment, as, while the physician generally has a correct appreciation of dietetic principles, he is likely to be lame on details. Here are given diet lists and practical directions in such form and detail as to be exceedingly useful. The statement, which is quoted and endorsed, that the dictates of the palate "are entitled to the utmost deference as those of the rightful authority in the choice of food," is true with reference to those persons provided with perfectly normal organs, but appears scarcely safe with a pathologic stomach. The time when to eat is still less to be trusted to the patient's sensations. Too frequent ingestion of food is a fault often beginning

with the first meal at the mother's breast, and is prolific in causing and aggravating those disorders attended by fermentation. In the treatment of gastric ulcer no mention is made of ice-cream as an article of diet. While it has not been largely used, a number of reported cases would indicate its value in a certain class of cases.

The third part, "The Gastric Clinic," comprising fully half the volume, considers in order the various stomach diseases,—organic diseases, muscular defects, neuroses, and functional disorders. In reading this book a very striking fact is the enormous preponderance of foreign titles in the numerous references and voluminous bibliography which accompany nearly every chapter. This disparity does not seem to be due to any prejudice in the author, for he gives abundant credit to American writers in a number of instances; but it must be taken to indicate an actual disparity in original work done and reported—a disparity which should not exist, and we hope will not exist for many years longer. With Dr. Hemmeter's work, as well as that of a number of others, for an example, American observers should put American medicine in this line well to the front. F. K. S.

OUTLINES OF RURAL HYGIENE. For Physicians, Students, and Sanitarians. By Harvey B. Bashore, M. D., Inspector for the State Board of Health of Pennsylvania. With an appendix on the Normal Distribution of Chlorin, by Prof. Herbert E. Smith, of Yale University. The F. A. Davis Co., Philadelphia, New York, and Chicago. 1897.

This little book, of seventy odd pages, should have a usefulness out of all proportion to its size. Few people, comparatively, have yet learned that a well is a perpendicular drain, and that "The old oaken bucket, the moss-covered bucket" may come up brimming over with disease and death. What percentage of people in city or country know anything about ground air, its composition, or its ability to bring disease into the household by way of the cellar? or about the principles of ventilation? or really think about the proper disposal of excreta, slops, and garbage? The work consists of a short chapter on each of the following subjects: Water-supply, waste disposal, the soil, habitations, disposal of the dead, and an appendix mentioned in the title. In plain language, aided by a few simple diagrams, the author points out dangers to health and gives directions, well-known and approved by sanitarians, for obviating them.

The brevity of the work is a recommendation, for it will not appear too formidable to busy practitioners, and especially to the laity, for whose perusal it is suitable, and for whom it would seem to be chiefly designed, although the author does not say so. The mistake might easily be made of trying to teach the people too much at one time. In sanitary matters the masses are yet children. Country doctors will find a work of this kind an aid in educating the people on the subjects treated. Heads of families may be induced to read it, and thus the teaching of the doctor will be fortified by the authority of the book. Teachers will find it handy in instructing pupils in those sanitary matters an understanding of which should form part of the education of every graduate of a public school, high or low. It is a neat little book, and its object and contents are to be commended.

W. A. KNOWLTON.

TWENTY-THIRD ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN. For the fiscal year ending June 30, 1895. By authority. Lansing, 1896.

To one not familiar with the facts, the extreme delay in the publication of the annual reports might indicate inefficiency in the state sanitary organization and management in Michigan. The contrary is, however, the case. Michigan was one of the earliest states to organize an effective department of public health. Its valuable work in sanitary investigations and popular dissemination of knowledge has been largely due to the indefatigable efforts of its able secretary for many years, Dr. Henry B. Baker. The board issues weekly and monthly bulletins of the condition of health throughout the state; and the proceedings of the board at its meetings, and of the sanitary conventions held at intervals in various cities, are published as soon as possible afterwards, while the annual report, being a permanent record and containing statistics which require great care in preparation, is subject to delay. Besides a record of the routine work at the offices of the board, the report comprises a thorough study of conditions attending the occurrence of each of the contagious diseases throughout the state during the year. F. K. S.

TRANSACTIONS OF THE AMERICAN MICROSCOPICAL SOCIETY. Edited by the Secretary. Twentieth Annual Meeting, held at Toledo, O., August 5, 6 and 7, 1897. Volume XIX. Buffalo, 1897.

The society is to be congratulated on the excellent

taste and good workmanship, from a typographical point of view, shown in this volume, issued under editorial supervision of the secretary, William C. Krauss, M. D., F. R. M. S., of Buffalo. The papers of medical interest are "The Comparative Histology of the Digestive Tract," by Edith J. Claypole, Ph. B., M. S., of Wellesley College; "A Comparison of the Phagocytic Action of Leukocytes in Amphibia and Mammalia," by John M. Berry, of Peterboro, N. Y.; "A Comparative Study of Hair for the Medico-Legal Expert," by Wm. G. Reynolds, M. D., of Watertown, Conn.; "A Study of the Organs of Taste," by A. E. Loveland, M. A., M. D., of New Haven, Conn.
F. K. S.

Correspondence.

CLEVELAND, O., March 30, 1898.

Editor Gazette :

Some time ago I was visited by an agent who claimed to be employed by a chimerical company styled the "National Physicians' Protective Association," with headquarters in some Castle in Spain, and who with smooth words and plausible statements induced me to part with three dollars, earned by the wear of my cerebral substance, if not by the sweat of my brow. The objects of this company — which existed only in the imagination of the agent, it seems, as I never heard of it further — was to collect the accounts of physicians and dentists, and to furnish quarterly to the subscribers a list of persons who belong to that numerous and active class who delight every physician's heart — the dead beat.

Some time afterward, not profiting by my first experience, I was visited by another smooth individual who was to start a local agency of the same nature, and who further relieved my purse of a dollar.

A few weeks ago another person of the same guild reached my office bearing a letter of recommendation from a prominent surgeon of this city highly recommending the man and his method. He was to furnish a directory of doctors and nurses, and leave copies in every hotel and drug store in the city. He further relieved me of a dollar, and I have failed to see a particle of work on his part as a recompense for the money he collected.

Experientia docet. Open confession is good for the soul. I relate my experience in these little business mat-

ters with no feelings of shame and chagrin, for upon the same lists of subscribers to such chimerical companies were the signatures of many physicians whose handwriting I know, and for whose good sense and judgment I have a high regard.

Is it not peculiar that men in whose judgment lie the lives and future good health of their fellow-men will allow themselves to be cheated by such puerile methods—to put themselves on the same plane as a farmer from Podunk, the victim of every sleek confidence man who chooses to swindle him out of money? Does it not prove the old saying that “the doctor is a poor business man?” Why should he be? What business man would pay for a thing till delivered?

One observation I made upon my little experience was that I was not alone in my desire to obtain some method of knowing those people who deliberately and intentionally defraud you out of your fees. For were there not many subscribers to these schemes, and were not many of them physicians who have been in practice a goodly number of years, who by the natural elimination of such people from their families would have disposed of such persons long ago? What conclusion can be made from it? Only that they were still experiencing the same thing. We all know that there are individuals and families who employ a physician until he begins to demand payment for his services, and then they patronize some other physician. And is not the time coming in these days of free dispensaries, hospitals, lodge doctoring and the turning out of physicians from colleges as though from a hopper,—is the time not coming, amid all this competition, when the physician will have to look more to the business side of his profession than he has done, and insist upon getting his fees from such persons?

I have much of sympathy for some physicians' families. I often feel that it would be a kindness to them, owing to their loose business methods, to have the probate court appoint for them a guardian in trust to manage their business affairs. Perhaps then, when they die and go to that land where there are no dead beats, I trust, his wife and family would have something to look forward to besides a small amount of life insurance.

If among tradesmen, such as plumbers and grocers for instance, they have a successful method of eliminating bad debtors, surely among physicians we could have as good a method with as good a success.

I propose a method subject to criticism, in the hope that enough physicians will become interested in it to evolve some successful plan. Let some physician act as secretary to whom every doctor wishing to enter shall send his list of *known* dead beats. Let that list include the name of the debtor in full, his address, the amount of the physician's bill, the physician's name, and how long the bill is due. The secretary could, every six months, adding to it such other names as have been sent in, arrange this list in alphabetical order, have it printed, and furnish a list to each physician. Then when a physician was called to see a new patient he could see if the patient's name appeared on the list, and if it did, refuse to attend except on a strictly cash basis.

The total expense would consist only of the printing, postage, and stationery — supposing the secretary to be generous enough to donate his time. This could be divided pro rata among those who desire such a list, and would be a very small yearly sum.

What would be the yearly saving? Suppose that each physician in this city lost each year \$50 from such patronage. There are over 700 physicians in this city, and the yearly loss in the aggregate would be \$35,000. This is a large sum, too large, one would think. And yet I believe that it is much greater. Providing each physician expended \$1 per year for the provision of such a list — and this is far more than it would cost — there would be a great saving yearly to the profession; it would be raising the profession one notch higher, and giving the recent graduate an opportunity to earn a living, and not spend, as we all have experienced, the first year or two of his professional life doing business for such people.

WM. CLARK, M. D.

Notes and Comments.

Ohio State Medical Society. The 53d annual meeting will be held at Columbus, May 4, 5, and 6, 1898, with headquarters at the Great Southern Hotel, where meetings will be held and exhibits displayed. The officers of the society are: President, William H. Humiston, M. D., Cleveland; Vice-Presidents, T. Clark Miller, M. D., Massillon; George Mitchell, M. D., Mansfield; D. H. Brinkerhoff, M. D., Fremont; E. H. Hyatt, M. D., Delaware; Treasurer, James A. Duncan, M. D., Toledo; Secretary,

The opening session will be held on Wednesday afternoon, and a reception will be given in the evening. On Thursday there will be sessions in the morning, afternoon, and evening, with the annual banquet in the evening, and on Friday morning the final session. The program of papers is as follows:

Tubercular Peritonitis, ... C. M. LENHART, M. D., Zanesville.
 Partial Cataract, ... C. F. CLARK, M. D., Columbus.
 Some Medical Aspects of Capital Punishment,
 F. O. MARSH, M. D., Cincinnati.
 Functional Heart Murmurs, ... C. F. HOOVER, M. D., Cleveland.
 Psychic Treatment of Disease, ... PHILIP ZENNER, M. D., Cincinnati.
 Intestinal Obstruction; Operation; Recovery,
 SHERMAN LEACH, M. D., Mt. Sterling.
 Syphilis of the Upper Air Passages, HOWARD STRAIGHT, M. D., Cleveland.
 Movable Kidney, ... YEATMAN WARDLOW, M. D., Columbus.
 Monstrosities vs. Maternal Impressions,
 GEORGE S. COURTRIGHT, M. D., Lithopolis.
 Irrigation with Salt Solution and Other Fluids in Surgical Practice,
 HUNTER ROBB, Cleveland.

Studies in the Morbid Anatomy of Epilepsy,
A. P. OHLMACHER, M. D., Gallipolis.

Operations on the Kidney, ... DUDLEY P. ALLEN, M. D., Cleveland.

Arterio-sclerosis, ... JOSEPH EICHBERG, M. D., Cincinnati.

Sarcoma of the Thigh. Operation with Results,
E. W. WALKER, M. D., Cincinnati.

Uric Acid, ... D. N. KINSMAN, M. D., Columbus.

Lumbar Punctures, ... R. J. WENNER, M. D., Cleveland.

Removal of the Caecum for Malignant Disease,
J. C. OLIVER, M. D., Cincinnati.

Henrobin's Method in Pelvic Abscess, . . J. C. REEVE, JR., M. D., Dayton.

The Alcoholic Forms of Insanity, . . E. G. CARPENTER, M. D., Cleveland.

Sequences of Abnormal Refraction, . . . D. R. SILVER, M. D., Sidney.

The Incision Less than One and a Half Inches in Appendicitis,
N. STONE SCOTT, M. D., Cleveland.
Surgery of the Pneumatic Sinuses of the Skull,
ROBERT SATTLER, M. D., Cincinnati.
Digitalis and the Heart, ... G. M. WATERS, M. D., Columbus.
The Obscure Cases of Gall Bladder Disease. H. S. STEVENS, M. D., Lebanon.

4 P. M.

Address in Surgery—Intestinal Tuberculosis, . . . NICHOLAS SENN, M. D.,
Chicago, Ill.

THURSDAY, 7:30 P. M.

Address in Medicine, ... H. A. HARE, M. D., Philadelphia, Pa.

FRIDAY, 9:00 A. M.

Is the Use of the Rectal Sound Scientific?

THOMAS CHARLES MARTIN, M. D., Cleveland.

The Technique of Minor Cosmetic Surgery, L. A. YOCUM, M. D., Wooster.
Ectopic Gestation; What Cases to Operate Upon,

J. AMBROSE JOHNSTON, M. D., Cincinnati.

Clinical Applications of Experimental Evidence of a Research into Col-
lapse and Shock, ... G. W. CRILE, M. D., Cleveland.

A Paper, ... W. A. DIXON, Ripley.

A Paper, ... W. J. MEANS, M. D., Columbus.

Ovariectomy During Pregnancy, . . . JOHN E. SYLVESTER, M. D., Wellston.

Bilateral Paralysis of the Posterior Crico-Arytenoid Muscles of the Larynx,
with Report of a Case, ... A. R. BAKER, M. D., Cleveland.

Surgical Treatment of Tuberculosis of Bone,

FRANK WARNER, M. D., Columbus.

Sarcoma of the Choroid, with Cases, . . . B. L. MILLIKIN, M. D., Cleveland.

Gastrostomy for Stricture of the Esophagus, and Report of Case,

E. M. GILLIAM, M. D., Columbus.

A Case of Cirrhosis of the Liver, ... P. J. KLINE, M. D., Portsmouth.

The Clinical Importance of the Position of the Stomach,

HENRY W. BETTMAN, M. D., Cincinnati.

Two Interesting Breast Cases, ... ALBERT H. FREIBERG, Cincinnati.

Head Nodding and Head Rotation Usually Associated with Nystagmus in
very Young Children, with Report of Two Cases,

CHAS. J. ALDRICH, M. D., Cleveland.

Methods of Dealing with the Stump of the Appendix, C. N. SMITH, Toledo.

Intracranial Complications of Aural Disease; Prognosis and Treatment,

ANDREW TIMBERMAN, M. D., Columbus.

The Ohio State Pediatric Society will convene on Tues-
day, May 3rd, at the Great Southern Hotel, Columbus.
In the evening a complimentary dinner will be tendered
to the members present. A final session will be held on
Wednesday morning. The following papers are included
in the program:

Artificial Foods for Children, ... E. A. HARPER, M. D., Columbus.

To open Discussion, ... FRANK WARNER, M. D., Columbus.

Acute Broncho-Pneumonia, ... G. W. MOREHOUSE, M. D., Sparta.

To open Discussion, ... W. C. MCGEE, M. D., Houcktown.

Prevention and Treatment of Hernia in Children,

C. S. HAMILTON, M. D., Columbus.

To open Discussion, { F. C. LARIMORE, M. D., Mt. Vernon.

{ B. MERRILL RICKETTS, M. D., Cincinnati.

The Rational Care of the Eyes of Infants at and Immediately after Birth,
ROBT. SATTLER, M. D., Cincinnati.

To open Discussion, ... C. F. CLARK, M. D., Columbus.

Action of Drugs in Children, ... J. B. MCGEE, M. D., Cleveland.

To open Discussion, ... W. J. CONKLIN, M. D., Dayton.

- Adenoid Vegetations of Naso-Pharynx, . THOS. HUBBARD, M. D., Toledo.
 To open Discussion, ... J. A. THOMPSON, M. D., Cincinnati.
 Etiology, Pathology, and Treatment of Entero-Colitis,
 W. S. PHILLIPS, M. D., Belle Center.
 To open Discussion, ... H. HENDRIXSON, M. D., Columbus.
 Osteotomy in the Correction of Rachitic Deformity,
 N. P. DANDRIDGE, M. D., Cincinnati.
 To open Discussion, . . . { THOS. C. HOOVER, M. D., Columbus.
 S. L. MCCURDY, M. D., Pittsburg, Pa.
 Abdominal Surgery of Children, . . CHAS. A. L. REED, M. D., Cincinnati.
 To open Discussion, . . . { W. H. HUMISTON, M. D., Cleveland.
 J. F. BALDWIN, M. D., Columbus.
 Uses and Abuses of Opium in the Treatment of Children,
 STARLING LOVING, M. D., Columbus.
 To open Discussion, ... { J. P. WEST, M. D., Bellaire.
 S. P. WISE, M. D., Millersburg.
 The Non-Operative Treatment of Strabismus, A. R. BAKER, M. D., Cleveland.
 To open Discussion, ... E. G. ALCORN, M. D., Gallipolis.
 PRESIDENT'S ADDRESS.
 Developmental Hygiene, ... T. CLARK MILLER, M. D., Massillon.
 To open Discussion, . . . A. H. HEWITSON, M. D., St. Clairsville.
 Intubation, ... W. E. LOWER, M. D., Cleveland.
 To open Discussion, ... MAX. THORNER, M. D., Cincinnati.
 Acute Otitis Media in the Exanthemata, . J. E. BROWN, M. D., Columbus.
 To open Discussion, . . R. C. HEFFLEBOWER, M. D., Cincinnati.
 Food and Care of Cows for Preservation of Milk,
 J. C. CULBERTSON, M. D., Cincinnati.
 To open Discussion, . . . { W. A. DICKEY, M. D., Tiffin.
 L. B. TUCKERMAN, M. D., Cleveland.
 Report of Case of Cretinism, ... R. E. SKEEL, M. D., Cleveland.
 Report of Case of Circumscribed Emyema,
 C. S. HAMILTON, M. D., Columbus.

The officers of the society for the present year are:
 President, N. R. Coleman, M. D., Columbus; 1st Vice-
 President, W. A. Knowlton, Cleveland; 2nd Vice-Presi-
 dent, Dickson L. Moore, M. D., Columbus; Secretary, D.
 S. Hanson, M. D., Cleveland; Treasurer, T. V. Fitz-
 patrick, M. D., Cincinnati. Local Committee of Arrange-
 ments, Edwin F. Wilson, M. D., Chairman; Herbert M.
 Platter, M. D., Secretary; Frank Winders, M. D.,
 Treasurer; Francis W. Blake, M. D., and Geo. M. Clouse,
 M. D.

Dr. C. I. Anders. The marriage of Dr. C. I. Anders
 to Miss Lelia Ione De Camp, of Elyria, Ohio, occurs on
 Wednesday, April 20, 1898. They will make their home
 at Old Fort, Ohio, where Dr. Anders has been in practice
 for some time past.

Dr. M. Coplan, who has been in New York for some
 months, doing post-graduate work, has been appointed

on the house staff of Lebanon Hospital, entering service on March 1, 1898.

The Warner Library, which was reviewed in a recent issue of the GAZETTE, has nearly reached completion. An interesting announcement concerning it will be found in the advertising pages of this issue.

Vaccination in Battery A. Dr. J. J. Erwin, Captain, Med. Dept. First Lt. Artillery, O. N. G., in his official report of the vaccination of members of Battery A, includes the following:

"All the men of this command had previously been vaccinated, and one had had smallpox. These, with but one exception, bore each from one to four typical marks which evidenced the fact that the objective effect in each had been successfully attained. Two had been vaccinated within two years, and from that the time intervened among the men extending back to childhood.

"The order not having been made compulsory, not all the men submitted to the operation. Out of the whole number (61 enrolled), 50 were treated. Of these, among whom were the two who had been vaccinated within two years, and the one who had had smallpox, 46 were decidedly successful, each arm showing the typical characteristics; and while probably 6 or 8 were uncomfortably annoyed, so far as I have been able to ascertain none were wholly incapacitated, but all continued to follow their accustomed vocations."

Dr. B. B. Brashear has removed his office and residence from 211 Prospect St. to the Clarendon, corner of St. Clair and Ontario Sts.

The Passing of Typhus. According to Dr. John William Moore, of Dublin (*Occident Med. Times*), typhus fever bids fair to disappear from its old haunts in the cities and towns of Ireland and the Irish quarters of the chief British towns. For several years past less than one-tenth as many cases of typhus have been admitted to the Dublin hospital as in a corresponding period fifteen years before, the decrease having been fairly constant during that time. The number of deaths from the disease in the Dublin Metropolitan District has lessened in approximately the same ratio.

THE Cleveland Medical Gazette

MAY, 1898.

Original Articles.

THE CHEMISTRY AND PHARMACOLOGY OF ERGOT.

DR. JOHN G. SPENZER, CLEVELAND,

Professor of Chemistry and Pharmacology, Cleveland College of Physicians and Surgeons.

Our knowledge, both chemical and pharmacologic, of few drugs has been so confused and unsatisfactory as that of ergot. This is in the main due to its delicate, unstable qualities, a proper recognition of which is the principal reason for the numerous publications (some 375) which have appeared up to date.

Vauquelin (1817) was among the first investigators, and he led the way to the accumulation of chemical compounds said to exist in the drug. They are:

1. Salts,—phosphates of calcium, potassium, and magnesium, with traces of manganese amounting to 3 or 4 per cent.
2. Carbohydrates,—dextrose, trehalose, mannite, and micose. (Würtz claimed trehalose and micose to be the same.)
3. Oils and fats in considerable quantity.
4. A cholesterol-like body, which Tanret¹ called

ergosterin, but is considered by Salkowski to be the phyto-sterin of Hesse.²

5. Coloring matter.
6. Nitrogenous bodies,—cholin, lecithin, and albumin.
7. The active constituents.

Tanret³ gave ergotin in as the active principle, this being generally adhered to by the French to-day.

Dragendorff and Podwissotzky⁴ supposed sclerotic acid to be the potent ingredient. In 1885, Kobert⁵ described two new substances as existing in ergot; these he called sphacelinic acid and cornutin. They were brown extracts. He was unable to prepare them in a pure form and therefore only gave them a general chemical examination; nevertheless he considered them sufficiently different from anything which had yet been prepared to subject them to a pharmaco-dynamic investigation. He concluded that the drug contained:

1. Ergotinic acid, a nitrogenous glucosid (ergotic acid of Wenzell, and the sclerotic acid of Dragendorff), paralyzing the brain and cord.
2. Sphacelinic acid, a resin.
3. Pikrosclerotin, a poisonous alkaloid.
4. Cornutin, an alkaloid and strong contractor of the uterus.

Kobert then held that cornutin, which was present in ergot in only very small quantities, was an exceedingly powerful convulsive poison, and that sphacelinic acid confined its action to the vessel and uterus contractions with no convulsive effect whatever. In other words he considered sphacelinic acid as the therapeutically important constituent of ergot.⁶ At the same time, he stated that no one would think of using cornutin as a practical oxytocic. In the course of time, however, Kobert reversed his views almost completely, holding that cornutin possessed the properties which he formerly ascribed to sphacelinic acid, making it thereby the real therapeutic agent, while sphacelinic acid now became only of toxicologic interest.⁷ Keller⁸ claims that ergot contains but

one active constituent, which he believes to be alkaloidal. He further believes that pikrosclerotin of Dragendorff, ergotinin of Tanret, and cornutin of Kobert are identical.

The latest important work on ergot is that of Jacobj.⁹ He shows the inconsistency of Kobert's change of ideas, since they are not based on any new investigations. He obtained three important constituents:

1. Ergochrysin, a yellow, non-nitrogenous, inert substance.
2. Secalin, an inactive alkaloid.
3. Sphacelotoxin, a non-nitrogenous resin possessing the desirable properties of ergot.

Sphacelotoxin, having the characteristic ergot-gangrene-producing effect on the vessels, as also the specifically energetic contractions of the uterus, must therefore be looked upon as the most important therapeutic constituent of the drug. A combination of sphacelotoxin with secalin (not to be confounded with a gum in wheat of like name) is called secalintoxin, while chrysotoxin is a compound of sphacelotoxin and ergochrysin.

Secalintoxin acts qualitatively the same as chrysotoxin, with the exception of the disagreeable effect on the gastro-intestinal canal, which it more readily occasions than the latter; they really differ only quantitatively. The active agent in chrysotoxin, as in secalintoxin, is the easily decomposable sphacelotoxin; whereas the other two components, ergochrysin and secalin, when given alone, are inactive.

Because secalintoxin is less readily absorbed and is more easily decomposed than chrysotoxin, the latter, particularly its sodium compound, readily soluble in water, seems to be better adapted for practical use.

In the isolation of the previously mentioned bodies, Jacobj avoided the use of anything likely to occasion decomposition, measured by the diminished activity of the ergot; particularly careful was he to exclude water, alkalies, and a temperature above 60° C.

He first removed the fat from the finely powdered ergot by means of petroleum ether, and then completely

exhausted the powder of fat with anhydrous ether, using a return condenser. The ether extract was evaporated in a vacuum to a syrupy consistence and then precipitated with petroleum ether.

By solution of the precipitate in ether and fractional precipitation with petroleum ether, the chrysotoxin could be obtained pure. It is readily soluble in ether, chloroform, alcohol, acetic ether, benzol, and carbon tetrachlorid, and soluble in concentrated sulphuric and glacial acetic acids; insoluble in water, dilute acids, and petroleum ether.

Caustic alkalies form golden-yellow solutions with chrysotoxin, which on warming suffer alteration. Alkaline carbonates and ammonia water only partially dissolve it. Chrysotoxin seems to possess more of a phenol than an acid character. Prolonged contact with excess of alkali converts the preparation into ergochrysinic acid, which is precipitated by hydrochloric acid. The sphacelinic acid of Kobert seems to contain this acid. The alkaline compounds of chrysotoxin are best prepared by adding to the ethereal solution of chrysotoxin a 99 per cent. alcoholic solution of the alkali in the exact proportion; the golden-yellow precipitate is pressed and dried in a vacuum over sulphuric acid. Chrysotoxin (or spasmotin) has also been obtained in the crystallin form, and has the formula:



Secalintoxin. It was found, in the first precipitation, that a nitrogenous body was present (Prussian blue reaction). In order to isolate it the impure chrysotoxin was dissolved in ether and shaken out with dilute acetic acid; through reprecipitation and drying an almost white powder was obtained. Small portions gave a decided nitrogen reaction, and by repeated evaporation in a porcelain dish with alcohol and concentrated sulphuric acid a pretty violet-colored residue remained; this coloration was produced with even 0.0001 gramme of substance.

In the acid solution of the substance occurred corresponding colored precipitates, particularly potassium mercuric iodid, which occasioned a marked cloudiness in

a dilution of 0.05 mg. in 1 c. cm. The alkaloid gave, with concentrated sulphuric acid, Keller's cornutin reaction without being identical with cornutin, which, as is well known, is a strong convulsive poison, whereas the secalin toxin is entirely free from a spasmodic action.

Secalin toxin is easily soluble in alcohol, acetic ether, chloroform, and benzol; less readily in ether and carbon tetrachlorid, and insoluble in benzine and petroleum ether; in water, dilute sodium hydroxid, and ammonia water, only a small quantity of the alkaloid is dissolved, but more in the last two when employed more concentrated. Glacial acetic acid, dilute acetic acid, oxalic, tartaric, and citric acids are likewise good solvents. Secalin toxin possesses slight basic properties, no glucosid characters, and has probably the formula $C_{18}H_{24}N_2O_2$. The strong foaming of the aqueous solution is characteristic.

Ergochrysin, the yellow, inert constituent of chrysotoxin, remains behind when the latter is repeatedly dissolved in glacial acetic acid and precipitated with water and well washed on the filter.

Secalin, which was obtained absolutely pure from secalin toxin in crystalline columns a millimeter in length, had in alcoholic solution a beautiful blue fluorescence. It gave the intense violet to blue color reaction mentioned under secalin toxin, also the nitrogen and alkaloidal reactions.

It does not correspond to Kobert's cornutin, because it does not produce cramps; nor with Tanret's ergotinin, which has another chemical composition.

$C_{29}H_{55}N_6O_{14}$ is best adapted to secalin.

Sphacelotoxin is therefore the specifically active constituent of ergot, separated from the ethereal secalin toxin solution on the addition of petroleum ether beside the secalin crystals as amorphous, at first yellow, after a time becoming green in the form of resinous masses, which could be readily washed out from the crystals by means of alcohol. The purified resin gave only traces of nitrogen and a hardly noticeable secalin reaction (violet coloring, to be referred to impurities).

Eight milligrams caused a prominent violet coloration of a rooster's comb and at the same time violent dyspnea. The preparation of the pure resin from secalintoxin is best done by means of lime. Sphacelotoxin can unite with either basic, neutral, or acid bodies.

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THE DIAGNOSIS AND TREATMENT OF PUERPERAL SÆPREMIA.*

R. E. SKEEL, M. D., CLEVELAND,

Professor of Obstetrics, Cleveland College of Physicians and Surgeons.

Sepsis having its origin in the parturient tract of the lying-in woman is unfortunately frequently considered as a distinct entity, or at least a specific disease, and articles are frequently published concerning its treatment which would lead one to believe that a single pathological factor was at work in its production, and that that factor could be eliminated by constant attention to the interior of the uterus, either by intra-uterine irrigation or curettage. On the other hand, there are those who contend that intra-uterine manipulations, at least of the radical sort, are certain to result disastrously, and they therefore counsel attention to general indications and a let-alone policy, so far as the genital tract is concerned. This state of affairs is in large measure due, I believe, to that fault

* Read before the Cuyahoga County Medical Society, Nov. 4, '97.

which seems inherent in the human mind of drawing general conclusions from an extremely limited experience. Puerperal sepsis, as a whole, is a subject about which we have much to learn, and especially is this true of the etiology, pathology, and bacteriology, which combine to produce pure symptomatic pictures of its various phases, but enough is known of its underlying conditions to warrant certain provisional classifications and to determine with some degree of certainty the treatment appropriate to these various classes.

The clinical manifestations depend not only upon the greater or less virulence of the poison which may be absorbed from the infected surface, but also upon the location of the absorbing infected surface and the kind and character of micro-organisms present and their capacity for entering and existing in living tissues; so that, between a mild putrid fever due to the retention and decomposition of a small amount of retained lochia, and acute septicemia, there is the greatest variation in symptomatology as well as treatment necessary.

Probably the commonest of septic puerperal processes is putrid intoxication or sæpemia, due to the decomposition of organic material in the genital tract, and absorption of ptomaines generated thereby. Portions of placenta, membranes, blood clot, or even the lochial discharge itself may be retained, undergo putrefaction, and thus give rise to the group of symptoms which are its external evidences. The symptoms of this form of puerperal sepsis are fairly characteristic, and by minute attention to their various manifestations we can ordinarily arrive at a correct diagnosis. The elevation of temperature which accompanies sæpemia is usually moderate at the outset, growing steadily higher with the progress of the disease, and is in marked contrast to the pulse rate, which from the start is much faster than the degree of fever would lead one to expect. Indeed, one of the earliest premonitions that we may have of anything wrong is a trifling elevation of temperature of two or three degrees, but with a pulse of 100 to 120.

Sepsis is ordinarily one of the early septic conditions following childbirth, coming on within the first four or five days, but in exceptional instances it is first noticed after the lapse of one or two weeks, and may then be easily mistaken for the far more serious condition of uterine and pelvic phlebitis. All the ordinary constitutional accompaniments of simple elevation of temperature are of course present, and creeping chilly sensations or rarely a distinct chill and irregular attacks of sweating occur. The local manifestations are extremely interesting, and upon them must be placed our greatest reliance in establishing a diagnosis. The lochial discharge may be either increased or diminished, usually the former, and becomes fearfully offensive in the vast majority of cases. Rarely an occluded or flexed internal os may prevent the free outflow of the discharge, and it thus becomes completely suppressed. The uterus is enlarged, soft, and tender to the touch, but spontaneous pain is not present unless the retained mass is large enough to provoke expulsive efforts on the part of the uterus, when characteristic colicky pains arise. The cervix is ordinarily much wider open than is normal to that particular date after parturition. If the source of the poison be in the vagina, the constitutional symptoms are apt to be milder and the uterine symptoms are entirely wanting. In diagnosing puerperal sepsis it is well to remember that even moderate elevation of temperature with increased pulse rate and suppression or foulness of the lochia is extremely suggestive of some form of infection in the genital tract, and that suspicion becomes almost a certainty when the other common causes of fever in the puerperium are ruled out; such, for instance, as constipation, extreme distension of the breasts, and marked nervous excitement. Simple sepsis has not been diagnosed, however, because a genital infection has been made out, for we must differentiate it from the other common forms of puerperal infection, such as acute streptococcic endometritis, salpingitis, or peritonitis, acute general septicemia, and uterine phlebitis. Acute streptococcic infection of the genital tract is

usually an earlier disease than is sapremia, because the infection takes place at the time of labor and its results show within forty-eight hours. Its onset is more often abrupt and with a distinct chill, the pulse rate is not out of proportion to the temperature, and pain spontaneous in character makes its appearance so soon as the infection reaches the peritoneum. The lochial discharge in acute infectious endometritis is apt to be entirely suppressed, while the reverse is generally true of sapremia. If the circumstances are such that anesthesia is wise, examination of the interior of the uterus will definitely determine the presence or absence of a sufficient amount of decomposing organic material to account for the symptoms. If the inflammation has spread to the peritoneum the differentiation between sapremia and pyogenic infection is easy, and it is only in the earlier stages that doubt will arise.

It must not be forgotten in this connection that we may have a mixed infection, and that decomposition and infection by pyogenic cocci may go on together. Uterine phlebitis is more apt to be mistaken for sapremia than any other form of infection, for we usually have the foul lochial discharge, and the constitutional symptoms are somewhat similar. Phlebitis is, however, as a rule a very late sequel and may come on after the patient is up and about, and in its pure form it does not interfere at all with the progress of involution. The lochial discharge is free and bloody, but upon palpation or bimanual examination the uterus is found approximately of the proper size for that date of the puerperium. Irregular chills and irregular fever are characteristic of phlebitis, and a patient may show a temperature range of six or seven degrees in twenty-four hours. This, by the way, is the form of infection so frequently and self-consolingly diagnosed as malaria. It is by the normal size of the uterus and the extreme irregularity of the temperature record that the diagnosis must be made. Acute septicemia of the primary and virulent form comes on very early, and runs such an extremely vicious course with a plainly fatal tendency

from the first that it can scarcely be mistaken after one or two observations. It is estimated that sappremia comprises at least 75 per cent. of all the cases of puerperal infection which occur in careful hands, so that its treatment is extremely important.

Prophylaxis is of primary importance, and particularly so because the inculcation of antiseptic doctrine has led to a marked limitation of the number of strictly infectious child-bed fevers and has, I believe, allowed us to forget that the furtherance of nature's own processes has much to do with the prevention of this, the commonest form of those diseases. Complete emptying of the uterus after labor is of course absolutely essential, and if anything is known to have been left either of the placenta or membranes this should be at once removed. Sometimes the placenta is torn in such a manner that one is uncertain as to the exact status of the case, and such uncertainty should lead to the closest observation of the subsequent convalescence, so that grave danger may be at once forestalled by a prompt removal of the retained portion, should symptoms arise indicating its presence. Good vaginal drainage, while not absolutely necessary, is certainly conducive to the welfare of the patient, and to this end I always insist upon the elevation of the shoulders above the level of the hips after the first twenty-four hours and also upon the sitting posture during urination and defecation, providing there is no contraindication. The active local treatment of sappremia when once the condition is present is comprised in the mechanical removal both of the bacteria of decomposition and the material upon which they feed. If the source of the trouble is simple stagnation of the secretions in the posterior vaginal cul-de-sac, a vaginal douche is all that is necessary, and sloughing vaginal tissues need the same measures of cleanliness with patience in awaiting the discharge of the dead tissue. When the trouble is intra-uterine, more active measures are necessary, and it is here that authorities clash. No one objects to the cleansing of the uterus, but the proper method of cleansing is on debatable

ground. Those who advocate intra-uterine irrigation assert that curettage breaks down the barrier of granulating tissue which is already limiting the spread of infection, and thus leads to the wider dissemination of an otherwise benign process, while the advocates of curettage point to the inadequacy of the douche as an antiseptic and its impotence in removing adherent clots and decidua. The strictly scientific method of treatment would undoubtedly be to anesthetize the patient, explore the interior of the uterus with the fingers, and allow the further treatment of the case to depend upon the condition found to be present. If a portion of retained placenta were found, its removal would undoubtedly suffice, but if the decidua were soft and decomposing, certainly a curettage would be necessary.

Anesthesia for simple exploration of the uterus is not ordinarily advisable, however, for its very suggestion when a patient is supposed to have passed the crisis of her illness is alarming, and some other method of investigation is usually necessary. If the appearance of the case is not serious, I believe it wise to try the effect of a single thorough intra-uterine irrigation with a solution of one of the milder non-poisonous antiseptics such as lysol, boric acid, or potassium permanganate, and the result will undoubtedly be satisfactory if nothing more than decomposition of the normal lochial discharge is present; but in the majority of cases such treatment is inadequate. Adherent blood clot, hypertrophied decomposing decidua, and small portions of placenta are more readily removed with the large curette than in any other way. Such curettage should be done with as much antiseptic precaution as the circumstances will permit. It should be preceded and followed by an antiseptic, or at least aseptic irrigation, and it goes without saying that care is necessary in order to avoid perforating a softened uterus. It is not necessary to dash in wildly and curette the whole interior of a uterus when that interior is not diseased. One who is familiar with the curette can explore the interior of the uterus with it nearly as well as

with the finger, and if its walls are covered with soft material that material should be carefully but thoroughly removed. If only a single piece of placenta or membrane be present, that can be removed and no further injury inflicted. When we remember that the germs present in these cases are principally saprophytic and are incapable of living and growing in living tissue, the claim that further spread of infection will occur is seen to be improbable at the best. There is usually a severe chill after the curettage, due to absorption of ptomains, but this one dose is all that can be absorbed, since there is no opportunity for further production. I believe that the disasters which may have occurred from this method of treatment were due either to the introduction of more virulent poison at the time of operation or to imperfect diagnosis, either a mixed infection or a phlebitis having been present at the time. The constitutional treatment is purely symptomatic and such as any physician will readily evolve as the case progresses. If I have not already trespassed upon your time and patience allow me to present the history of one or two cases illustrating this form of puerperal sepsis and its treatment:

I. Mrs. T., æt. 23, was confined with her second child Jan. 17, 1897; the presentation and position were normal and the labor short and easy, but one vaginal examination being made. The patient was visited for five days after labor, and during that time the temperature and lochia were perfectly normal and the uterus seemed to be undergoing natural involution. The pulse was a little fast, but not enough to excite suspicion. On the ninth day I was summoned to the house with the statement that the patient had for two or three days flowed too freely. The temperature was found to be 103.4°, pulse 160, lochial discharge free and foul. No chill had occurred, but the patient complained of feeling cold. The secretion of milk had entirely ceased. The uterus was soft, distended, and slightly tender to the touch, but there was no spontaneous pain. The interior of the uterus was at once explored with a curette, and its walls were

found thickly covered with necrotic decidua and laminæ of decomposing blood clot. This was thoroughly curetted away and the uterus irrigated with 1-6000 bichlorid solution and packed with iodoform gauze. The temperature on the morning of the tenth day was 102° and the pulse 108. On the evening of the same day the temperature was 103° and the pulse 128. The uterus was again irrigated and packed with gauze. On the eleventh day the morning temperature was 101° and pulse 126. The evening temperature was the same and the pulse 120. The uterus was repacked, but no douche used. On the twelfth day the morning temperature was 100.4° and the pulse 116. The uterine packing was removed, the uterus well irrigated, and no further intra-uterine interference of any kind was practised after this date. On the fourteenth day the temperature and pulse were normal, the lochial discharge was free from odor, milk had returned to the breasts, and the patient expressed herself as "feeling as well as ever." I will venture to say that the same result could not have been obtained in the same time by any other method of treatment.

II. The second case is that of Mrs. T., æt. 37, the mother of four children, who had had no difficulty at any of her previous confinements. I was called to see this case in consultation with Dr. Wheatley, and found that previous repeated but ineffectual attempts at delivery had been made; the last consultant called had perforated the head, but owing to unfavorable surroundings had been unable to deliver. The patient was taken to the Cleveland General Hospital and again anesthetized, and with two hours' hard work delivery was effected after decapitation and removal of one arm. It was noticed at the time of delivery that the small amount of liquor amnii still present in the uterus had a suspicious tendency toward foulness. The vagina and uterus were carefully irrigated and the patient put to bed in profound shock. Without going into the details of the case it is sufficient to say that she had a severe chill and immediate rise of temperature on the next day, but I was satisfied that this was

produced by the direct absorption of ptomaines from the wounded surfaces at the time of delivery. The lochial discharge became foul on the second or third day, and the temperature and pulse continued to be elevated, but there was a total lack of any symptoms pointing to uterine infection. Examination of the vagina showed that some of the bruised and lacerated vaginal mucous membrane was undergoing necrosis; the uterus was never entered either with the finger or instruments after the patient was delivered and cleaned up. The vagina was irrigated frequently and all the available denuded surfaces were cauterized to limit absorption through them.

The patient made a complete recovery so soon as all sloughing had ceased and is now perfectly well, but with several vaginal cicatrices, which in no way interfere with its lumen.

DISCUSSION.

DR. H. J. HERRICK opened the discussion. He said that normally, after parturition, the uterus contained shreds, small blood clots, and dilated veins. The absorption of the products of decomposition depended upon the general condition of the patient. His method of preventing infection is to build up the general health. He does not approve of the curette or the uterine douche, but makes a practice of using the vaginal douche thoroughly.

DR. HANSON agreed with the essayist in regard to the use of the curette. Even though the curette does break down granulations and render the conditions for absorption more favorable, yet the removal of the materials of decomposition leaves nothing to be absorbed.

DR. QUIRK suggested the use of the blades of lithotomy forceps as curettes in cases of retained placenta, the outer surface being so smooth as to do no harm, while the inner, being rough, is suitable for engaging fragments of the retained tissue.

DR. KNOWLTON believed ergot given after labor to be a preventive of retained clots. He also believed that the patient should sit up during defecation and urination, thus favoring a natural drainage of the vagina. In his

early practice he was accustomed to fortify his patients against infection by toning up, but later has changed his method and now does not hesitate to empty the uterus of retained and decomposing material.

LEPROSY IN CUBA.

BY WM. THOMAS CORLETT, M. D., L. R. C. P. LOND.,

Professor of Skin and Genito-Urinary Diseases in the Medical School of Western Reserve University; Physician for Diseases of the Skin to Lakeside and Charity Hospitals, Cleveland.

Leprosy, being one of the oldest diseases with which we are acquainted, is always of general interest; but leprosy in Cuba is especially of interest at this time. It is doubtful whether the leprosy spoken of in Leviticus, which is supposed to have been written about 4,000 years ago, is identical with the leprosy as we know it to-day. Of this we are positive, that many diseases entirely distinct from leprosy were regarded as such and were so spoken of in Holy Writ. In later times the disease seems to have been widespread throughout Europe, although in England it has not existed as an endemic disease since the 16th century. On the contrary, in Norway and Sweden, Southern France, and in Spain, the disease is still met with, and in some places it is of common occurrence. In Northern Africa, the East and West Indies, Mexico, and scattered throughout the Southern States of our own country, a few sporadic cases may still be found. Six years ago, while visiting the island of Cuba, I was especially fortunate in meeting a medical gentleman, Dr. Enrique Robelin, who is thoroughly familiar with the disease as it exists in this island. He was of the opinion that fully 200 cases existed in the city of Havana, and the disease was equally prevalent throughout the island.

Lepers may frequently be seen on the streets of Havana, and in the shops mild forms of the disease may be occasionally seen. Especial effort was made to ascer-

tain whether or not any precautions were taken to exclude them from the tobacco factories. The foreman in one of the cigar departments told me there were no lepers in his room, nor could any evidences be found to the contrary from a casual inspection of the parts of the skin exposed to view. More danger would arise from the paper used in making cigarettes, although no cases have come under my observation where the disease was presumably contracted in this way.

Especially interesting was the Hospital San Lazaro, situated in the city of Havana and containing at the time of my visit 87 cases of leprosy presenting the various stages of the disease. This hospital is one of the most celebrated now existing for the exclusive reception of this class of patients. It was founded many years ago by a gentleman, himself a leper, who bequeathed extensive lands in the suburbs of Havana to the founding of an asylum for those similarly afflicted. As the city increased in size the lands became more valuable until, at the time of my visit, the rental derived from them was more than sufficient to meet the current expenses of the hospital. It is to be regarded more as an asylum for lepers than a place of segregation; no compulsory laws exist in Cuba for the isolation of lepers, although at all times they are admitted to the San Lazaro and cared for until they wish to change their surroundings, or are compelled to depart to that world from which no traveler returns. No effort is made to treat the disease, and they are cared for by attendants who minister to their daily wants and do what they can to mitigate their sufferings. Should American troops invade Havana, or should the island become annexed to the United States, the problem of properly caring for the lepers would naturally arise.

Much dread is manifested in coming in contact with the disease. Its contagious nature has long been known, and until we became more familiar with its method of propagation, unnecessary fear prevailed. Through the efforts of Hansen and others we are made familiar with the active principle, the germ of the disease, which when

inoculated in another gives rise to leprosy. It is only by inoculation therefore that the disease can be taken. The disease is not highly contagious, and one having a sound skin might come in daily contact with it without danger; whereas the slightest abrasion on the surface might serve as a port of entry and receive from particles of dust containing the bacillus lepræ the seed which might develop the disease. This process is slow in its action, and numerous instances are recorded where the disease has developed years after the person has migrated to a country where leprosy is unknown. The course and stages of the disease are likewise of long duration, so that years rather than months are counted in its evolution.

Before the real cause of leprosy was known many theories were advocated to account for its distribution over the globe. One of the most persistent advocates of a dietetic cause of leprosy is Jonathan Hutchinson, of London, who still maintains that an exclusive diet of fish is the cause of the disease. Coming from one so well known to be an authority on different medical subjects the fish theory of leprosy has received careful consideration. It is not, however, accepted by other leprologists, and to-day the germ cause of the disease is generally accepted. Experience proves, therefore, that the disease is not a menace to life where due precaution is observed. In most of the hospitals of Europe leprosy is received in the general wards with other cases. In the Hôpital Saint-Louis of Paris there are frequently from four to six cases in the wards, and in London there are usually a dozen or two cases scattered throughout the city at any one time. Hamburg, too, has a large contingent of lepers, being a seaport town and brought into intimate relationship with leprous countries. In Unna's hospital, two years ago, there were about a dozen cases. The danger of contact is regarded as similar to that of syphilis, to which the disease bears many points of resemblance. After inoculation the person remains in a normal condition of health for a variable length of time, which may be months or years. Finally, however,

the germs of the disease develop and produce their unmistakable train of symptoms.

There are two main varieties of leprosy which clinically appear quite distinct. The onset of the two forms is the same. There is usually a general feeling of malaise, chilliness, and stupor. Indigestion is oftentimes a prominent symptom. This may subside or alternate with periods of comparatively normal health. Soon, however, the special lesions of the disease become apparent. There is usually a reddened or erythematous condition of the skin, extending over large areas, usually occurring on the face, although no part of the body is exempt. The areas are larger, covering several square inches, than are other eruptive diseases. The redness, too, is more persistent, lasting for weeks or months. The color is characteristic, being of a reddish-brown or light mahogany color, sharply defined, unaccompanied by pain or itching. At this time the symptoms of the disease vary according as one or the other form of the affection ensues.

In the *tubercular form*, reddish nodules, which vary in size from large peas to marbles, are seen in the folds of the skin. At other times the skin of the face, notably of the forehead, seems to be thickened, and the natural folds deepened, giving a ridged or lion-like countenance to the victim. As the disease progresses these tubercles enlarge, some coalesce, and finally, after years, break down and ulcerate. New lesions appear on the extremities, notably the fingers and toes, which go through the same cycle of events. When ulceration takes place, however, one section of the finger, including the bone, becomes detached. This is not always the farthest removed or distal extremity, but a section of finger may drop out, as it were, and the distal portion become contracted to take its place, thus shortening the length of the digit. At other times the fingers or toes become distorted, ankylosed, and shriveled. As the disease progresses the various parts are eaten away until, as in many cases observed in San Lazaro, the hands and feet consist of club-shaped extremities.

The throat seldom escapes, the same processes going on as above described. At first the voice is husky, later a shrill whistling sound is produced in attempting to speak, and finally the patient succumbs either from exhaustion or from some concurrent malady. This extends over many years, however, and the patient a leper from youth may live to old age.

In the second clinical type, the *neurotic form*, the disease attacks mainly the nerve trunks, producing anesthetic areas and marked discoloration of the skin. Unquestionably the disease which we now call vitiligo was confounded with leprosy among the ancients. The white areas of this disease, especially common among the dark races, bear some resemblance to the discoloration of the anesthetic form of leprosy. But in the former the sensibility of the skin is not impaired. There is a complete removal of pigment and an increase of pigment granules in the skin surrounding the marble-like area. Whereas, in leprosy, the spot, although of a whiter color, is not entirely devoid of pigment, and there is not an exaggerated tint in the regions surrounding. The whitened spot is usually insensitive to sharp objects thrust into the skin; thus, a needle may be inserted through the entire thickness of the skin without its being perceived. The course of this form does not differ materially from that previously described in the tubercular variety. Recessions occasionally occur, but the disease pursues, for the most part, an uninterrupted course until in from ten to thirty or forty years death comes to the patient's relief.

The Treatment of Leprosy. Doubtless many cases do, when removed from debilitating conditions such as obtain in many leprous countries, such as heat, moisture, bad hygienic surroundings, insufficient food, etc., which contribute largely to hasten the course of the disease—show marked improvement, and in some instances the disease apparently leaves. It is not, however, a permanent cure, as invariably the disease returns upon any lowering of the general vitality.

Drugs of various kinds have been vaunted from time

to time as a panacea for this one of the greatest of human ills. Experience has demonstrated, however, that none of them possess infallible qualities, nor can they be regarded in any way as specifics. Chaulmoogra oil has probably enjoyed the greatest popularity in the treatment of leprosy, having been first advocated by La Page, of Calcutta. From its long use and the carefully prepared reports of various observers, we are able to-day to judge of its merits. It possesses without question qualifications in the amelioration of the disease, and under its use the lesions seem to be held in abeyance if they do not entirely disappear. The disappearance, however, is not of long duration if the medicine is discontinued, for invariably the disease finally returns.

Climatic conditions and hygienic surroundings undoubtedly are of the greatest importance in its eradication. Of the 16 or more emigrants from Norway, known to have been lepers, who settled in the northwestern states of our own country, especially in Minnesota, but few are now known to have the disease. Either the original settlers have died out without communicating the affection to others, or the conditions there existing have proven efficient in a curative way. We have reason to believe, were the Cuban lepers to migrate to a cooler climate, where better hygienic surroundings obtained, their condition might be greatly improved. There can be no doubt, however, that much danger would ensue to those with whom they might mingle. The only way of preventing and exterminating the disease is unquestionably by segregation. This has been found extremely difficult, and in some instances well-nigh impossible. In the Sandwich Islands efforts at segregation have not always been completely executed. The island of Molokai, set aside for their reception, has been shunned by lepers, and every method has been adopted to escape the vigilance of the authorities. Segregation has been practised for many years in the maritime provinces of Canada, notably at Tracadie, in New Brunswick, with the result of protecting the people at large and of gradually exterminating the malady in this region.

Finally, as to the danger of commingling with lepers, the sensational reports of Father Damien, who contracted the disease while acting as a missionary in the Sandwich Islands, are familiar to all. Yet with care, and understanding the method of propagation, one may associate with lepers with but little danger. Neither is there danger in allowing lepers to remain in a community, provided they are not brought into intimate relationship with those not affected. Care to cover all denuded surfaces with flexible cellodion or other protective is imperative. Care to use no drinking vessel, pipe, or other substance handled by lepers is equally necessary to avoid the disease. The paper currency in circulation in Cuba is a source of danger, and care in handling it should not be lost sight of. Finally, it should be borne in mind that anything which tends to lower the general vitality of the body predisposes to the development of the disease.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

COLLABORATORS:

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Editorial.

THE FEE FOR AN OFFICE CONSULTATION.

The fee table of the New Jersey State Medical Society places the price of advice, when family physician, \$1 to \$2; advice in the office, with no prospective treatment, at \$3 to \$5; advice when minute examination required, \$3 to \$10. Subsequent advice for same malady, \$1 to \$2; written advice or opinion, \$2 to \$20. The fee bill of the Union Medical Society of Columbiana and adjoining counties Ohio places the price of the office prescription at 50 cents to \$1; written opinion, \$2 to \$5; opinion involving a question of law, \$5 to \$10.

The Mahoning County Medical Society charges, "for examination and prescription, according to the importance of the case, 50 cents to \$5 (all medicine to be charged

extra); for a letter of advice or written opinion, \$1 to \$5; for examination of urine, \$2 to \$10.

The Delaware County Medical Society places the charge for an office prescription at "not less than 50 cents;" critical examinations not less than \$3.

The North Central Ohio Society prices the ordinary office consultation at \$1; with exhaustive examination, \$5 to \$10; with exhaustive examination, written, \$10 to \$25.

Lake County Society values the "ordinary prescription" at 50 cents, written opinion involving an hour's labor at \$3 to \$10; written opinion involving legal issue, \$25 to \$50.

The Tuscarawas County fee bill calls for 50 cents to \$1 for an office prescription, and for physical examination, \$1 to \$5.

We have just a few observations to make upon these quotations. First, we think that the fifty-cent charge should become obsolete. If a physician's opinion is worth anything at all it is worth more than fifty cents. The trouble is that too many prescriptions are written without any examination. We have seen fee bills which read, "Prescription, 50 cents; prescription with examination, \$1," which upon its face is an acknowledgment of cheap guesswork. If the doctor *knows* and prescribes either with or without an examination, it is worth at least a dollar, and if he has not knowledge his prescription or advice should not be trusted at all. Let the physician who has been working and half starving at fifty cents always make a careful examination and charge one or two or three or five dollars, and he will find that he will not only have a bigger fee but before long he will have a bigger business. If he does not know how to make the careful examination let him quit the business and go at something else, or study and learn how. We have too many hurried prescriptions written at fifty cents apiece. Then, to add to the labor-for-a-little, the fifty cents is charged on the book. By the time the fifty-cent charge is entered on the ledger and stands there a few months or a few years, and has required time to figure it up with

more of like small denomination, and to make out a bill, which bill is likely discounted when it comes to a settlement; or postage or a collector's fee is deducted from it, it becomes pitifully insignificant.

The rule should be that all office charges are to be paid cash. The practitioner can, at his discretion, relax this rule with his most reliable patrons, but it is best not to be too ready to relax it. It is a good plan to have a sign, "Office consultations invariably cash" prominently displayed. We are well aware that some men never charge less than one, and usually two dollars or more in the office, but we are not writing for these few, but for the great majority of the profession in general practice. Doubtless it will not be easy for some practitioners to work a reform in their community and raise their charges, which custom has long established at a low rate. Many patients will object to paying a dollar when they have usually paid fifty cents, and perhaps can even yet obtain a prescription from the rival practitioner, located not far away, for fifty cents.

But many such patients will be fully satisfied if a fuller examination is made. Not that we would advocate a show of examination where none is necessary; but we venture to assert that oftentimes a more careful examination is needed, and might be productive of great benefit to the patient; but the doctor who expects to get only a half dollar for his trouble does not think it worth his while, and tosses off a prescription which neither does him any credit nor the patient the good which might have been accomplished.

There is another plan which will aid in raising the fee; namely, to dispense medicine at the office. Many a patient who would grumble at paying a dollar for a prescription will go away well pleased if furnished with advice and medicine (enough for a day or a few days or a week, according to the nature of the case), whereas the medicine costs the doctor but a trifle at wholesale, and he not only pockets twice his former fee, but he teaches his patient to pay a dollar at the doctor's office.

Moreover, that patient will have to come back if he wants more medicine, and cannot repeat his prescription indefinitely at the drug store; and cannot loan it to his brothers and his neighbors and his sisters and his cousins and his aunts. The rates mentioned on the fee bills for written opinions and opinions in medico-legal cases are all very well, but why should there be so wide a difference between these and the ordinary office consultation? Anyway, they are no great factor in the average doctor's earnings. Such cases are very few compared with the ordinary everyday office consultation, and it is this latter kind of practice which needs to be carefully looked after. We are well aware that in abolishing the fifty-cent fee we should not bring about an ideal condition of office practice. But this reform is within reach; it is reasonable, and practicable, and together with the cash system would add very materially to the medical income.

POLITICS AND MEDICAL INSTITUTIONS.

In times past and in times not yet entirely past, positions in public institutions of all kinds, including the medical, have too often been regarded as legitimate spoils of office and bestowed as rewards for political services. This has often not only imposed upon the public inferior talent, in the first instance, but has sometimes displaced experienced, efficient, and satisfactory officers for less competent and desirable public servants who happened to have more of a "pull." Occasionally an assistant or employe who has received appointment for no particular fitness, but to pay for services rendered "the party" or some individual high in authority in "the party," is unable to keep up a pretence of filling the position he is appointed to, and to avoid scandal is "turned down." Then he proceeds to lay in complaint against the management in general and the one who exposed his inefficiency in particular, and proceeds to exercise his "pull" for revenge. Of course he must be heard and his charges, however false or absurd, must be investigated.

We are led to these reflections by the report of the committee of the Board of State Charities which was appointed to investigate the charges made by ex-Steward George L. Currier against the management of the Ohio Hospital for Epileptics at Gallipolis. It is pleasant to see that Dr. Rutter, manager of the institution, was not only completely exonerated, but the report, so far from censuring him, rendered a splendid testimonial to the success of his administration. The committee consisted of Mr. Henry C. Ranney, General R. Brinkerhoff, and Mr. Wm. A. Hale, who thoroughly considered all the evidence which Mr. Currier could bring. One after another of the nineteen charges proved upon examination to have no sustaining foundation, some were absurd, and in regard to others, when the whole transaction came to light, Dr. Rutter was even commended for his action under the circumstances.

The portion of the report which most directly interests medical men is *Charge 18*, which will be of special interest to those acquainted with Dr. Ohlmacher:

"Charge 18 contains, first, the allegation of a fact, viz., that an expert biologist, pathologist, and bacteriologist is employed at the Ohio Hospital for Epileptics at the salary of \$3,000 per annum and board for himself and family, consisting of wife, two children, and nurse. This is true, and if it were not made to produce the impression of extravagance could be passed without comment, but it must be borne in mind that Ohio is a pioneer in the special treatment of epileptics; second, that the object is not simply to treat and care for the patients so as to make life tolerable, but to cure; that cures as shown by our investigation are numerous, and many patients are rescued from the dreadful malady; that it was the intent and purpose to conduct this hospital upon the highest scientific principles; that to do so a pathological department was absolutely indispensable, and that the state in careful scientific study of the body and the application of the knowledge thus obtained would be rewarded a hundred fold, not only in the gratification of the humane senti-

ment that founded this institution, but in the fair fame and luster that Ohio now enjoys in the front ranks of scientific progress.

"The corps of physicians was unanimous in regarding facts already obtained as invaluable in the treatment of the patients under their care.

"The department is all that is claimed for it. The post-mortem work has already attracted the attention of eminent pathologists both in the United States and Europe. Wide correspondence proves the deep interest awakened by the advanced work. The influence of the startling discovery relating to the thymus gland, the contracted aorta, the abnormal condition of the mucous membrane of the intestines present in epileptics, has directed attention along hopeful lines; while the study in bacteriology has strengthened the hope of early discoveries that encourage diligence in seeking the secret that lies concealed in this malady. The appointments are complete; the work up to all known scientific conditions, and the specialist in charge industrious, qualified, and tireless in his duty; aside from this the definite diagnosis of disease is of superlative value. The microbes of malaria, typhoid fever, diphtheria, green pus, slow abscess, tuberculosis, and many other diseases are determined at once in a definite, scientific manner, and intelligent treatment and increased cures follow. The department is at once the least that a great state ought to attempt when assuming the care of such patients, and is much of what was contemplated in the creation of this hospital.

"This charge contains, second: The allegation that a specialist asked an assistant, which the board denied, and that the manager, to avoid the action, appointed an assistant physician and assigned him to work in the laboratory. This was not proven. On the contrary, the testimony shows that the board approved the act of the manager and had at no time denied his request for such assistance."

The report concludes as follows:

"Our conviction, from all the observations we were

able to make, and all the information that came to us during our investigation, is that the State Hospital for Epileptics is ably and honestly conducted, and is worthy of the confidence of the people of the State.

"All of which is respectfully submitted.

"Signed—Henry C. Ranney, chairman; R. Brinkerhoff, William A. Hale, committee. Attest: Joseph P. Byers, secretary."

It is particularly gratifying to note the attitude of the board toward the scientific work of the institution. It will be a blessed day for medical science in this country when all medical appointments are made upon the scientific, moral, and mental qualifications of candidates without regard to political opinions or party affiliations or services. If those attempts had succeeded, not long ago, which sought to displace Dr. Eyman from the Cleveland State Hospital, a scientifically qualified, skilful, and experienced superintendent would have been lost to the public service, for no better reason than that somebody else wanted a job. There are better qualifications for medical positions than the possession of "influence" with the powers that be, or industrious application to the art of wirepulling, and the sooner public opinion demands these qualifications and supports them morally and financially when found, the better for scientific medicine, the better for the inmates of institutions, and for the public generally.

We regard the outcome of the Gallipolis affair as a distinct victory for medical science in its struggle for recognition of its rights at the hands of the government—that is, the people.

Periscope.

THE INFLUENCE OF EXTIRPATION OF THE OVARIES UPON STRUCTURAL CHANGES IN THE UTERUS.

Even at the present time, when the operation has been practised for many years, we are far from possessing a completely accurate knowledge as to the remote

effects upon the organism which may possibly be traceable to the removal of the ovaries. Much that has been written upon this subject is purely theoretical, and even clinical observation has not as yet furnished us with sufficient data from which to draw definite and satisfactory conclusions. In a great measure clinicians have been at a loss, inasmuch as many of the symptoms which may possibly be due to the absence of the ovaries can well be accounted for by other conditions, and from the gynecologist we have received but little help, by reason of the fact that they are too prone to dwell upon the absence of pain and discomfort in the pelvis which has followed the operation, and to forget that certain constitutional symptoms, which later on become prominent, may possibly have been induced or aggravated by the absence of the ovaries and the consequent premature cessation of the menstrual function.

In studying this question it would seem that it would be better to begin at the beginning and first try to discover from pathological anatomy the structural changes which take place in the genitalia after the removal of the ovaries. It is possible that the results obtained from working on these lines will fail to give us a solution to all the questions which have been raised and which this subject ought to deal with, but at any rate it would seem that we may expect to obtain a firm basis upon which other investigations may be pursued. In this connection two recent articles, the first by Solokoff,¹ the second by Gottschalk,² dealing with changes in the uterine tissues following ovariectomy are of special interest. Thus far neither of these investigators have done much to solve our difficulties, but there can be no doubt that their work will stimulate further researches in this direction, the ultimate results of which cannot at the present time be measured.

As Solokoff remarks, it is only natural that, since the whole function of the remainder of the genitalia in the woman is to render possible the development into new organisms of the material furnished by the ovaries, the taking away of such an important organ as the ovary must necessarily exert an important influence upon the remainder of the genitalia, and more especially upon the uterus. Solokoff, therefore, made experiments upon animals, choosing full-grown bitches of medium size and female puppies. In one series of experiments one ovary, in the

¹ *Archiv für Gynäkologie*, LI (1896), 2. ² *Archiv für Gynäkologie*, LIII (1897), 2.

other both ovaries were removed. The wounds, as a rule, healed by first intention. Both full-grown bitches and young puppies were included in each series. During the first day after operation lack of appetite, continual thirst, and a desire for rest were noted. Later on, however, the animals underwent a change. They became fat, indolent, and apathetic; the difference becoming more marked as time went on.

Rutting appeared normally, in both old and young, in those animals which had been deprived of only one ovary, but was absent in those which had been bilaterally castrated. This premature cessation of rutting had also been observed in young sows by Hegar, and in dogs by Frank.

The animals were killed in from 20 days to 4 months after operation; no traces of persistent peritonitis were found. Sections from the uterus in the case of animals recently operated upon showed that though slight changes may appear at first, the removal of one ovary has no effect upon the structure of the uterus, and in young animals the development of the uterus continues after the operation. In cases of bilateral castration the following findings were noted:

1. Marked changes in the muscular layer, which is the chief constituent of the uterine wall. (a) Atrophy in the circular layer setting in as early as 6 weeks after castration. (b) Disappearance of muscle fibres in the longitudinal layer, the fibres being less close than in the corresponding layer in the normal animal. The layer is diminished to half its normal thickness.

2. No changes in the vessels.

The atrophy increased in direct proportion to the time which had elapsed before the dogs were killed.

In specimens from a dog killed 14 months after operation, the following were noted:

1. There is no trace of atrophy in the mucosa.

2. The circular layer does not present so broad a ring as in normal specimens. It is thin and the muscle fibres are separated, and in places broken.

3. The vessels are much altered. They are much thickened; their lumen is narrower than normal, and many are obliterated. The intervening tissue is atrophied to such an extent that the vessels often touch one another.

4. The longitudinal layer has almost entirely disappeared.

From tabulated results Solokoff then shows that

atrophy begins first in the circular layer. The changes are intense and rapid, they reach their maximum in 4 months, after which time they practically cease. The longitudinal layer atrophies more slowly, but the wasting is continuous. In spite of the great changes in the muscular layer the mucosa remains unaltered. Neither fatty degeneration nor albuminous clouding is discovered, but there is much change of form in the individual muscle cells. The fibrillary substance has disappeared, and only the nucleus and a granular protoplasm are left. Qualitative changes in the muscle cells is not found, but quantitative atrophy is to be noted.

The results of the work of Weissmann and Reissmann agree with those of Solokoff in regard to the effect of the removal of one ovary, as well as in regard to atrophy of the muscular layer after castration. According to these authors, however, the mucosa is affected. The cylindrical epithelium becomes cubical and at times undergoes fatty degeneration. The uterine glands disappear, and the mucosa is greatly atrophied. Since the experiments of these investigations were made upon rabbits, Solokoff castrated a certain number of rabbits also, but could find no changes in the mucosa.

Solokoff concludes that this much is certain: Clinical and experimental proof shows that after castration the uterus undergoes atrophy; and it is clear that there is an anatomical relation existing between the uterus and the ovaries in consequence of which the removal of the latter brings about atrophy of the former. The relation between the organs may be through the vascular or through the nervous system. Hegar and others have taught that the extirpation of the ovary, like the removal of a gland, causes atrophy by causing changes in the blood supply. Against this view it may be urged that, (1) The ovaries are not developed like other glands. (2) No gland has an outlet in which the glandular secretion is subjected to such changes as take place in the ovum when in the uterus, especially during pregnancy. (3) It has never been shown that after atrophy of a gland its outlet is obliterated. According to Thierfelder, in acute atrophy of the liver even the smallest bile capillaries remain and there are no changes in the gall ducts.

Schroeder, Martin, and Veit would attribute atrophy of the uterus after castration to a decrease in the materials for nutrition, owing to the ligation of the vasa spermatica. But collateral circulation would soon develop

and prevent atrophy; and experiments have shown that the ligation of the spermatica has no effect on the supply of blood going to the uterus, inasmuch as collateral circulation is quickly established through the uterine arteries. But it is clear that quantitative atrophy of the uterus arising from castration must depend upon a decrease in nutrition, and therefore it is clear that removal of the ovaries leads to an interruption in the processes of assimilation going on in the uterine tissue. Such regulating influences can be exercised only by the nervous system. By castration some of the connections between the central nervous system and the vessels of the uterus are interrupted, or the vascular or trophic centers situated in the ovaries and governing the nutrition of the uterus are destroyed together with the ovaries. That the ovaries are in direct connection with the uterus through the central nervous system has been proved by experiment. It has been shown that stimulation of the ovarian nerves can bring on uterine contractions.

Solokoff concludes somewhat as follows: "What changes, then, does castration bring about in the nervous system? Rein's experiments have shown that the isolation of the uterus from the central nervous system by cutting through the branches of the sympathetic or the sacral nerves has no influence upon the nutrition of the organ, so that the marked atrophy after castration is not due to this cause. Therefore since isolation of the uterus from the central nervous system causes no atrophy, and the extirpation of the ovaries does bring it about, we may assume that the nerve center which governs the nutrition of the uterus is situated in the ovaries, and that the destruction of this center is the cause of the atrophy following castration. This view is strengthened by the fact that the interruption of normal functions and a failure of the phases of assimilation must cause atrophy. As the ovaries are the point of departure for stimuli to the uterus, their removal stops the functions of the uterus, which are necessary for the preservation of any muscle. But as contraction is not essential to the nutrition of the mucosa, it does not suffer atrophy after castration.

This hypothesis is supported by our experiments and the clinical observations of Gottschalk and Kleinwächter who noted atrophy of the uterine muscles together with preservation of the mucosa."

Gottschalk begins his article by saying that, although it is an undoubted fact that the uterus atrophies after cas-

tration, we are far from understanding the pathological-anatomical changes concerned, and still less do we know the etiological factor.

Two cases only, in human beings, as yet have been reported in which a thorough examination on these lines was made. Benckiser removed the uterus from a woman three months after castration and found that the organ, even in this short time, showed an atrophy of 2 cm. in its long diameter. Microscopically, he noted the disappearance of the ciliated epithelium and an endarteritis obliterans. To the latter he referred the atrophy. Eckardt found a decrease in the mucosa and in the glands, many of the latter having become cystic. The muscular tissue showed no fatty degeneration, but was evidently atrophic. The endometrium was very poor in cells; the whole picture resembled that of a senile atrophy. Gottschalk considers briefly the experimental work upon animals and notes the divergences of opinion, especially with regard to the mucosa existing among the various investigators. He contends that their results cannot be applied to the human uterus. He then proceeds to report a case of his own in which both ovaries were removed on account of a bilateral gonorrheal pyosalpinx. At the end of eighteen months the patient came back complaining of watery discharges, which, however, were proved not to be due to a reinfection. The uterus, which was much atrophied, was removed, and the patient recovered. The extirpated organ measured in its greatest length 5.4 cm.; in its greatest circumference, at the fundus, 8 cm. The mucous membrane was very thin. The ciliated epithelium had disappeared. The superficial and glandular epithelium was much infiltrated. There was marked fibrillary change in the ground substance. It was noted that the atrophy was much more marked in the body of the uterus than in the tissues of the cervix. The atrophy of the mucous membrane in the corpus uteri, shown by the decreased height of its structure and the small amount of intercellular elements in the glandular tissue, was striking. The connective-tissue corpuscles were much reduced in number and size. The intercellular substance was loosely connected; the fibrillary tissue was abnormally increased, but loosely connected; and, as it approached the muscular tissue, was seen in the form of circular fibres. The ciliated epithelium had disappeared. The superficial epithelium was either cubical or resembled quite small endothelium. The glandular epithelium was

low and non-ciliated. The glands themselves were diminished in number, and their lumina were very small. In places crypt-like dilatations were noted. It is possible to follow the various stages of destruction of the glands. They are reduced in number and become narrower. They lose in depth and thickness, and the epithelium undergoes degeneration. Rudiments of glands, however, are seen free upon the cervix, and remind one of a return to an embryonic stage. Eckardt, in his case, noted no free orifices of the glands on the surface. The mucous membrane had not suffered uniformly in height. Just where the posterior and anterior wall came together, and in the cornua, it was better preserved than in either the anterior or the posterior wall. This holds true less for the interglandular substance than for the glands. It would appear that the glands were not atrophied proportionately with the mucosa. They could be followed far into the muscular tissue, and whereas a third part of the length of the glands belongs to the mucosa, two-thirds belong to the musculature. Thus it will be seen that glands have a hold which is not provided for the mucosa. Eckhardt noticed also the deeper penetration of the glands into the muscular tissue. Gottschalk does not deny the possibility that the high grade of the mucosa might have been caused, not by the castration, but by the discharges which the patient suffered from. In the corpus uteri the muscular tissue as compared with the mucosa had held out relatively well. The individual muscle cells, however, showed a decrease in the size of the body and of the nucleus. The inter-muscular tissue was increased, but it could not be decided whether we were dealing here with a progressive fibrillary metamorphosis of the muscle cells, or the end products of an old inflammatory process. But it is to be noted that there was no trace of an old inflammation in the mucosa. In the cervix the mucous membrane was better preserved. The ground substance showed no certain signs of a progressive atrophy, and thus stood in marked contrast to the mucosa of the body. The muscular atrophy was great, especially in the individual muscle cell. The increase of the inter-muscular tissue had taken place, partly at least, at the expense of the musculature.

The flat epithelium on the vaginal portion showed no marked change. In the vessels the endarteritis found by Benckiser could not be detected, nor was there any hyaline degeneration or any marked atrophy of the muscular

coat. The only peculiarity noticed in the larger arteries was a marked folding of the intima corresponding to a functional diminution in the size of the lumen produced by an increased tonus in the vessel wall.

Gottschalk goes on to say that since the few experiments show that it is not constant in castration atrophy, endarteritis obliterans cannot therefore be the cause of the wasting. If the atrophy were due to the cutting off of the spermatic arteries, it would occur in cases in which these arteries were ligated on both sides. As a matter of fact, the experiment has often been tried on animals, and always with negative results. To supplement these experiments on animals, Gottschalk quotes a case in a woman in whom the adnexa were removed from one side on account of a tubal abortion, the sound ovary being left behind. On account of hemorrhage the internal spermatic artery was tied on the other side. Thus the blood supply from both ovarian arteries was cut off from the uterus; but no atrophy took place, and the periods continued regularly. Thus he concludes that, so long as active ovarian tissue is left, the cutting off of the supply of blood to the uterus from the spermatic arteries causes no atrophy of the organ. Is it possible, then, that castration produces degeneration in the uterine nerves, and so causes atrophy? On examination the nerve showed no signs of degeneration.

Gottschalk answers the objection that gonorrhea might have been the cause of some of the changes noted, by showing that there were no signs to warrant such an assumption. Hydrorrhea, he says, is never a consequence of endometritis gonorrhoeica. He thinks that this may have been due to nervous influences exerted upon the gland epithelium. In any case, hydrorrhea is not a constant occurrence in castration atrophy. He sums up somewhat as follows:

"Insufficient blood supply and nerve degeneration, then, are not causes of castration atrophy, and yet atrophy does occur after castration. It is clear that from the marked folding of the intima and the narrowing of the lumen of the vessels there ensues an increased functioning of the vasomotor nerves. On what does this increase depend? We must remember that the uterus is normal only during ovulation, and that atrophy does not take place while active ovarian tissue is left in the body. The process of ovulation brings to development the infantile uterus, and its absence causes senile atrophy. In order

that the uterus may preserve the size and consistency which belongs to the organ in the mature woman, a periodical relaxation of its vasomotors is necessary. This occurs during the process of ovulation. To avoid atrophy the uterus requires the nutritive stimulating process of the ripening of the ovum. If ovulation ceases, whether the cessation be brought about naturally or artificially, the periodical relaxation and greater flow of blood ceases, and the vessel walls stiffen on account of a proportionately increased tonus. The vessels are therefore poorly filled, and atrophy of the whole organ takes place. This, I think, is the best and most natural explanation of castration atrophy."

Von Herff's³ interesting studies in this connection deal solely with the question of the innervation of the ovaries. As a result of his work he is able to assert that, though not forming a veritable ganglion, ganglion cells belonging to the sympathetic nervous system are to be found in the ovary.

From this brief review of a part of the literature it will be seen how wide a field of research is opened up by the question of the changes following castration in the female, and how many obscure points still remain to be solved by future investigations. ROBB.

Among Our Exchanges.

The tendency to run in ruts is in no way better illustrated than in the manner in which the copper test for sugar has held its own in the use of the general practitioner and the insurance examiner, notwithstanding the fact that, though it is reliable as a negative test—no reduction, no sugar—it is thoroughly unreliable as a positive test—reduction may mean sugar or it may not. Creatinin, which is not infrequently in excess in urines of high specific gravity, reduces the copper solution, and DR. THOS. B. FLETCHER, of Johns Hopkins University,¹ calls attention to a most interesting case of *alkaptonuria*,—a man in apparently perfect health, but who had been repeatedly rejected for life insurance because of a supposed diabetes, and became scared into a prolonged treatment therefor, as two eminent English and one eminent German specialist had confirmed the diagnosis. The fer-

³ *Archiv für Gynäkologie*, LI (1896), 2.

¹ *N. Y. Med. Jour.*, Jan. 15, '98.

mentation test, however, gave no reaction. There was no reduction of bismuth with Böttger's test. The phenylhydrazin test was also negative, as was likewise the test by the polariscope. The poor fellow had been denied his life insurance; he had spent his money being treated in Carlsbad — and all because the specialists who examined him had pinned their faith to the Fehling's test. For the general practitioner, Böttger's bismuth test and the fermentation test are the most practicable. If he find a urine of specific gravity 1.010 to 1.020, straw-light amber-colored when first voided, assuming on exposure to the air, and owing to the absorption of oxygen, a reddish-brown color, first at the surface, then extending deeper; if on adding a few drops of alkaline solution and shaking the change of color is almost instantaneous, and if it reduces Fehling's solution, he is dealing with a case of *alkaptonuria*, and only in very exceptional cases will he find any accompanying glycosuria, as shown by a response to the bismuth and fermentation test. The condition is of no pathological significance, and calls for no treatment whatever. Every instrument which simplifies the accurate determination of the constituents of the urine serves to render urinalysis more general among busy men and their diagnosis in so far the more exact. For this reason the thanks of the profession are due to DR. DOREMUS for the exceedingly convenient ureometer of his invention, which ought to be regularly made use of by every practitioner; but, convenient as it is, his ureometer has no correction for temperature, barometric pressure, height of column of liquid, etc., and hence its readings can be but approximate. DR. ANDREW STEWART, however, of Washington, D. C., suggests an easy way whereby this difficulty can be remedied and the readings of the instrument made to give as accurate results as the more complicated instruments, so that the DOREMUS becomes a real instrument of precision.² One source of error is the bulb pipette commonly used, and graduated at 1 c. c. Unless the physician is very steady of nerve, fluid is likely to be lost, or the hypobromite solution sucked into the pipette by the uncertain grasp of the fingers on the bulb. Instead of the bulb DR. STEWART uses a hypodermic syringe, filing the needle short off and connecting the stub with the pipette by means of a short piece of rubber tubing. Before filling the pipette, the piston should be drawn back a trifle in order to allow sufficient extra play to eject the

² *Nat. Med. Review*, Jan., '98.

last drop of urine. The urine is first drawn in — a little above the 1 c. c. mark, then ejected down to the 1 c. c. mark, then the curved beak is introduced well into the neck of the DOREMUS and the urine, to the last drop, slowly and steadily injected into the hypobromite solution. The instrument should be allowed to stand 20 minutes before the volume of nitrogen is read off. This gives the uncorrected reading. To correct the reading a standard solution of urea is used (2 per cent. is the most convenient, as its correct reading on the ureometer is just 20), one or two drops of strong phenol solution being added to each 100 c. c. in order to prevent fermentation. The pipette tube is removed from the syringe barrel, washed with water, and rinsed with the control solution, then the control solution is tested as the urine was tested, and the reading taken. Then we have the proportion as follows: Actual reading of control solution is to correct reading of control solution as actual reading of urine is to corrected reading of urine. For instance, during the hot weather last June, a urine tested by DR. STEWART read 20.5; at the same time the control solution, owing to the expansion of the gas by the heat, etc., read 23. That gave the proportion, $23 : 20 :: 20.5 : \text{correct reading of urine}$, $20 \times 20.5 \div 23 = 17.83$ parts in a thousand as the exact amount of urea in the urine in question. The importance of considering carefully the quantity and the quality of the urine not merely in cases where there is gross degenerative change in the kidneys themselves, but also in cases where there is no appreciable lesion, cases gynecological, cases dermatological, etc., is becoming increasingly evident to the more thoughtful physicians, specialists as well as general practitioners, and the work of DR. JAMES H. ETHERIDGE, of Chicago, and DR. L. DUNCAN BULKLEY, of New York, is especially suggestive as regards the relation of *renal insufficiency* in kidneys not organically diseased to some of the diseases peculiar to women, and to diseases of the skin.³ To get the total quantity of urine passed per diem DR. BULKLEY has his patients use an ordinary two-quart mineral-water bottle, with a strip of paper pasted on the side for the scale. This is graduated by filling the bottle from a two-ounce measure and marking off each two ounces, the intervening ounce being determined by the eye. A glass funnel is placed in the mouth of the bottle, so that all the urine can readily be poured in as passed. The index is read

³Jour. Am. Med. Association, Jan. 8, '98.

off, the amount recorded, and the bottle emptied at a fixed hour every day, and a sample of the whole sent to the physician's office with the statement of the total amount passed. The total solids are estimated from the specific gravity of the sample by HAYNES' modification of HAESER'S method, viz.: *Multiply the last two figures of the specific gravity of the urine by the number of ounces voided in twenty-four hours and add 10 per cent. of the product.* Thus, say the amount passed was 36 ounces and the specific gravity 1.021; $36 \times 21 = 756 + 10$ per cent.—(75.6)—831.6, the number of grains of solids passed in the twenty-four hours, and whether this be above or below normal can be readily determined by reference to three tables, the first of which was prepared for DR. ETHERIDGE by an expert physiologist, showing approximately how much solids a healthy person in active exercise should excrete by the kidneys daily, according to his bodily weight. It is as follows:

<i>Weight.</i>	<i>Total urinary solids.</i>
40 pounds	392 grains.
50 "	479 "
60 "	563 "
70 "	639 "
80 "	716 "
90 "	789 "
100 "	854 "
110 "	916 "
120 "	974 "
130 "	1028 "
140 "	1078 "
150 "	1150 "
160 "	1198 "
170 "	1237 "
180 "	1260 "
190 "	1300 "
200 "	1330 "

Dr. Etheridge, however, in view of the fact that women always excrete less than men—probably about one-tenth less,—and that women out of health and who come for treatment may be expected to excrete less than those engaged in active work, has constructed a table for practical daily work, showing the minimum that a woman of average health may be expected to excrete daily in proportion to her weight:

<i>Weight.</i>		<i>Total urinary solids.</i>
90 pounds		500 grains.
95 "		535 "
100 "		570 "
105 "		605 "
110 "		640 "
115 "		675 "
120 "		710 "
125 "		745 "
130 "		780 "
135 "		815 "
140 "		850 "
145 "		885 "
150 "		920 "
155 "		955 "
160 "		990 "
165 "		1025 "
170 "		1060 "
175 "		1100 "

These tables are computed for persons under 40 years, the period of more active metabolism. Between 40 and 50 years a deduction of 10 per cent. should be made, 20 per cent. between 50 and 60, and 30 per cent. between 60 and 70. Among the cases given by DR. ETHERIDGE the following is illustrative. A multipara sorely troubled with general metritis and double laceration of the cervix, complicated with an obstinate bronchitis with profuse secretion, the severe cough aggravating the pelvic suffering and vesical irritability as well as the profuse leucorrhea. She was better in summer, and in warmer climates where she sought relief, but with the advent of cold weather her bronchitis invariably returned, aggravating all her other ailments. She had been industriously and repeatedly gynecologized, but without result. Finally it was found that she was passing but 298 grains of urinary solids, when her normal amount should not have been less than 850 grains. Stimulating diuretics, tonics, and a laxative increased her urinary solids to 950 grains within thirty days, and though it was winter, the cough disappeared and she was in better health than for many years. One of DR. BULKLEY'S cases was a girl of 23 who gave the history of grave uterine troubles, among which was profuse menorrhagia with very great pain. For these troubles she had received "an infinity of treatment" for several years. She had become unable to

climb stairs, so she had an elevator put into her house. She consulted DR. BULKLEY for an indurated acne, one of the worst cases he had ever seen. She drove to his office, and, as she could not come up the stairs he saw her in the reception room on the ground floor. For her acne he gave her alkaline diuretics, laxatives, tonics, etc., and a regulated diet, and she took meantime no gynecological treatment whatever; but as her acne began to yield her pelvic symptoms improved. She surprised the doctor by walking upstairs to his office, and by the time her acne was cured she was walking a mile to the doctor's house without discomfort and had abandoned the elevator at her home. She had been symptomatically cured of her pelvic trouble by a treatment directed to the relief of insufficient kidney and bowel action. This is a fertile field for the general practitioner. If he shall see fit to cultivate it assiduously, it may be thus he can, perchance, hope to lift from the shoulders of some overworked specialist the burden of a thousandth oöphorectomy or appendicectomy.

TUCKERMAN.

New Books.

A CLINICAL TEXT-BOOK OF SURGICAL DIAGNOSIS AND TREATMENT FOR PRACTITIONERS AND STUDENTS OF SURGERY AND MEDICINE. By J. W. Macdonald, M. D., L. R. C. S. Ed., Professor of the Practice of Surgery and of Clinical Surgery in Hamline University, Minneapolis, etc. With 328 illustrations. Philadelphia, W. B. Saunders, 1898. Price, cloth, \$5.00 net. W. T. Galbraith, agent, 602 New England Bldg.

The idea of bringing within the scope of one volume the whole range of surgical diagnosis is a natural result of the expansion of treatises on surgery into many volumed cyclopedias. As an appeal to the student or practitioner who wishes to secure the greatest practical utility in a given number of cubic inches of paper and printing ink, treatment is incorporated with diagnosis. Whether the result of such a plan is the accomplishment of the greatest good is problematical and depends partly on how the plan is carried out and also on the manner of using the product. For the student it cannot be considered the best plan to divorce diagnosis and treatment from a full consideration of etiology and pathology. The practitioner, on the other hand, when he wants help from his surgery in deciding about a particular case, is likely to skip these latter subjects, and if he has a single volume

bearing on those points he is after for the moment he will be likely to consult it first. It is to the practising physician, then, that such a volume should appeal. The author has, however, endeavored to make it attractive to the student, and has introduced more or less elementary matter, not strictly necessary to the subjects announced by the title. While many topics are very fully treated, some are not given in so great detail as would be appropriate in a treatise confined to those subjects. One is thus led to the suspicion that the author expected it at times to supplant the regular text-book with the student, rather than to supplement it.

With these reflections on the scope of the work, criticism is mainly at an end. It is attractively written, the consideration of topics is well up to the best modern methods. As a rule the author selects methods of operation or treatment which meet his approval, and ignores the rest. Thus, in treating of cancer of the breast he quotes Professor Halstead's description of his operation in full and does not refer to others. As a rule this is the best method and is most satisfactory to the practitioner who wishes to consult the book for practical guidance, and leaves abundant space for consideration of some topics which would otherwise suffer abbreviation. On the other hand, some things are omitted which might better have been included. For example, under fractures of the femur he mentions Nathan R. Smith's anterior splint and Hodgen's splint, saying that they are of great advantage in certain cases, but he gives nothing further in regard to the method of use. Hodgen's splint is one of the most satisfactory in many cases, but practitioners often do not know how to use it properly, and few text-books give sufficient explanation. The same remark may be made with regard to Professor Young's fracture apparatus. Detailed descriptions would be of value and would be eminently in place in such a work. The book contains among its illustrations many reproductions of photographs from the collections of a number of surgeons, not before published. The last chapter treats of the Roentgen ray in surgical diagnosis.

F. K. S.

PAMPHLETS RECEIVED.

In most cases the pamphlet here mentioned will be forwarded to the interested reader by addressing the author and enclosing a stamp. Kindly mention *THE GAZETTE*.

JOHN C. HEMMETER, M. B., Ph. D., M. D., Clinical Professor of

Medicine in the Baltimore Medical College, etc., and DELANO AMES, A. B., M. D., Lecturer on Pathology and Director of the Pathological Laboratories in the Baltimore Medical College, etc.: A CASE OF PHLEGMONOUS GASTRITIS FOLLOWING ULCUS CARCINOMATOSUM OF THE PYLORUS—DILATATION, PERFORATION, AND PERITONITIS. A clinical history of fourteen months with Chemical, Bacteriological, and Histopathological Study; from the *Medical Record*.

SETH SCOTT BISHOP, B. S., M. D., Prof. of Diseases of Nose, Throat, and Ear, Illinois Medical College, etc.: CLINICAL TESTS OF NEW REMEDIES; from the *Laryngoscope*. AUTHORS AND THE JOURNALS.

OTTO LERCH, A. M., M. D., Ph. D., New Orleans, La.: THE UNRELIABILITY OF A METHOD CONSIDERED GERMICIDAL; from *N. O. Medical and Surgical Journal*.

F. WALTER BRIERLY, M. S., M. D., Philadelphia: THE TREATMENT OF SPECIFIC URETHRITIS; from *Hahnemannian Monthly*.

R. B. LEACH, M. D., Minneapolis, Minn.: A MEMORIAL TO CONGRESS PRAYING THAT A TEST BE MADE OF THE ARSENIZATION METHOD OF TREATING THE DISEASE OF CHOLERA.

C. C. FITE, M. D., New York City: SOLUTION OF THE PROPRIETARY MEDICINE QUESTION; from *Philadelphia Medical Journal*.

LEARTUS CONNOR, A. M., M. D., Detroit, Mich.: AMBLYOPIA FROM SUPPRESSION, CONGENITAL IMPERFECTION OR DISUSE; WHICH OR ALL? from *Journal American Medical Association*.

A. V. L. BROKAW, M. D., St. Louis, Mo.: AN EXHIBITION OF RADIOGRAPHS WITH REMARKS; from *Transactions of Southern Surgical and Gynec. Association*. SOME CONCLUSIONS DRAWN FROM EXPERIENCES IN PELVIC SURGERY.

JOSEPH EASTMAN, M. D., Indianapolis, Ind.: THE QUESTION OF PELVIC SUPPORT; from *American Gynecological and Obstetrical Journal*. DIAGNOSIS IN ABDOMINAL DISORDERS.

GEORGE M. EDEBOHLS, A. M., M. D., Prof. of Gynecology, New York Post-Graduate School, etc.: THE INGUINAL OPERATION FOR FEMORAL HERNIA; from *The Post Graduate*. THE OTHER KIDNEY IN CONTEMPLATED NEPHRECTOMY; from *Annals of Surgery*.

T. L. CHADBOURNE, B. S., M. D., Columbus, O.: A CASE OF VICARIOUS MENSTRUATION; from *Journal American Medical Association*. A CASE OF ACROMEGALY WITH DIABETES; from *New York Medical Journal*. DIGESTION LEUCOCYTOSIS IN STOMACH DISEASE; from *Columbus Medical Journal*.

DR. W. E. SCHENCK: PERNICIOUS ANEMIA; from *Cincinnati Lancet-Clinic*.

PARKER SYMS, M. D., Surgeon to Lebanon Hospital; Assistant Gynecologist to New York Cancer Hospital, etc.: THE SURGERY OF TUBERCULOSIS OF THE PERITONEUM; from *Medical Record*.

A. M. PHELPS, M. D., New York City: THE PRODUCTION AND SALE OF ANTITOXIN BY THE NEW YORK BOARD OF HEALTH.

SIDNEY V. HAAS, M. D., and J. BENNETT MORRISON, M. D., late House Surgeons, Mt. Sinai Hospital, New York: A CLINICAL STUDY OF KRYOFINE; from *New York Medical Journal*.

CLARK BELL, LL. D.: THE TRUTH ABOUT CIGARETTES; from *The Medico-Legal Journal*.

J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S. E., Lecturer on Midwifery, Minto House, Edinburgh; Examiner in Midwifery, University of Aberdeen: THE PATHOLOGY OF ANTE-NATAL LIFE; from *Glasgow Medical Journal*.

H. O. WALKER, M. D., Detroit, Mich.: SOME REMARKS AND REPORTS UPON SPECIMENS IN ABDOMINAL SURGERY; from *The Physician and Surgeon*.

STATE BOARD OF HEALTH, Lansing, Mich.: TEACHERS' SANITARY BULLETINS for April and May.

L. DUNCAN BULKLEY, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc.: NOTES ON THE NON-SURGICAL TREATMENT OF BOILS, CARBUNCLES, AND FELONS; from *British Medical Journal*.

F. C. HOTZ, M. D., Chicago, Ill.: THE TREATMENT OF THE MALPOSITION OF THE LID BORDER IN TRACHOMA; from *Journal American Medical Association*.

B. B. BRASHEAR, A. M., M. D., Prof. Emeritus of Clinical Medicine and Applied Therapeutics in the Cleveland College of Physicians and Surgeons, etc.: IMPERATIVE CONCEPT; from *Cleveland Medical Gazette*.

JOHN PUNTON, M. D., Prof. of Mental and Nervous Diseases, University Medical College, etc., Kansas City, Mo.: THE RELATION OF THE SCIENCE OF MEDICINE TO PUBLIC SCHOOL EDUCATION.

LEWIS S. SOMERS, M. D., Philadelphia, Pa.: ADDUCTOR VOCAL PARALYSIS; from *Medical News*. TUBERCULOSIS OF THE TONSILS, PHARYNX, AND LARYNX; from *Medical and Surgical Reporter*. THE INFLUENCE OF DISEASES OF THE NARES AND PHARYNX ON AURAL AFFECTIONS; a Study of Six Hundred Cases of Middle Ear Disease; from *University Medical Magazine*.

CHARLES A. OLIVER, A. M., M. D., one of the Attending Surgeons to the Wills Eye Hospital, etc., Philadelphia: SOME OF THE INEFFICIENCIES OF THE METHODS ORDINARILY EMPLOYED BY RAILWAY SURGEONS FOR THE DETECTION OF SUBNORMAL COLOR PERCEPTION; from *Annals of Ophthalmology and Otology*. A PERFECTED SERIES OF TEST-TYPE; from *International Medical Magazine*. CLINICAL HISTORY OF A SERIES OF OPERATIVE PROCEDURES FOR THE CURE OF CICATRICIAL ECTROPIUM FROM ANTRAL DISEASE; from *University Medical Magazine*.

RALPH J. WENNER, M. D., Visiting Physician to St. Clair Hospital, Cleveland: ACUTE EMPYEMA OF THE FRONTAL SINUS WITH REPORT OF CASES; from *Cleveland Journal of Medicine*.

JOHN ELIOT WOODBRIDGE, M. D., Cleveland: TYPHOID FEVER; a Report from the Transactions of the Fifty-Second Annual Meeting of the Ohio State Medical Society, held at Cleveland, O.

JOHN L. JELKS, M. D., Memphis, Tenn.: ISCHIO-RECTAL ABSCESS, WITH REPORT OF CASES; from *Hot Springs Medical Journal*.

THOS. H. MANLEY, M. D., Professor of Surgery, New York School of Clinical Medicine: RENAL SUPPURATION, CATARRHAL, SPECIFIC, AND TRAUMATIC, and the Value of Micro-Uranalysis of the Urinary Sediment as an Aid to Definite Diagnosis; from *Journal American Medical Association*.

Correspondence.

Editor Cleveland Medical Gazette:

DEAR SIR:—I wish to write a word regarding the recent meeting of State Pediatric Society. When we consider the recent formation of this society (this being the fourth annual meeting), the attendance and value of the papers read were both remarkable. The range of subjects discussed included the larger part of children's diseases. All the phases of infant feeding were most thoroughly gone over, from the condition of and care of the cows that produce the milk to the time it enters the child's stomach. The intestinal disorders associated with, and largely dependent upon the food taken were most minutely reviewed in connection with this subject.

Several papers relating to the administration of drugs to children were very fine, and that of Dr. Starling Loving on the "Use of Opium in Children" was, using the vernacular, *simply a dream*.

The subject of pneumonia was most thoroughly gone into and several points brought out that were especially good, among which was the use of apomorphia as an expectorant.

The surgical part of the program was very excellent. The surgical diseases of the abdomen were most carefully considered and ably discussed; and here, as in most other medical societies, "had the floor."

The subject of empyema was equally well looked after, and altogether the scientific work of the society was of a high order. We predict a useful if not brilliant future for the society.

It would hardly be fair to the officers and members in Columbus to let this opportunity pass without mentioning the fact that a complimentary dinner was served by them and that they made the meeting a successful one from a social standpoint.

The officers elected for the ensuing year were: President, Dickson L. Moore, Columbus; first vice-president,

T. Clark Miller, Massillon; second vice-president, O. T. Maynard, Elyria; secretary, D. S. Hanson, Cleveland; treasurer, Frank Winders, Columbus. Council: E. F. Wilson, Columbus; J. C. Culbertson, Cincinnati; W. S. Phillips, Belle Centre; G. W. Clouse, Columbus.

In this connection allow me to say a word regarding the state society's meeting. Cleveland talent was very much in evidence, a fact that is cause for congratulation among *ourselves*. The meeting most thoroughly illustrated the fact that medicine runs in *fads*. The papers upon internal medicine were not *in it* when compared with those on abdominal surgery. The *length of the incision* seemed to be very important, and other points in technique that are well understood took much time of the society in their discussion. Other surgical subjects were not gone into to any great extent in comparison with this. The papers and discussions of heart murmurs and diseases were especially good, and a paper on "Gall Bladder Diseases" was a fine production. Some papers relating to position and disorders of stomach were, to say the least, very instructive. A paper on uric acid was very ably presented.

The address of Dr. Hare, of Philadelphia, as was to be expected, was very well chosen and ably presented.

All regret the absence of Dr. Senn, but in these *troubulous times* we must submit to inconveniences and disappointments.

Not being able to hear all the papers, as I did in the pediatric society, I am not able to give so complete a résumé of the work done.

The usual banquet was given and, of course, enjoyed by all. Other social events were provided by the committee of arrangements, and Columbus doctors sustained their reputation as entertainers.

D. S. HANSON.

Notes and Comments.

Dr. F. E. Weeks, of Clarksfield, is engaged upon a history of that town, which was among the earliest settlements of the Western Reserve.

Test of Death. In Portland, Ore., recently, a Chinaman became unconscious in a store. A Chinese doctor was called, who proceeded to fill the man's mouth and nos-

trils with red paint. Said the doctor: "Him blow out paint, him all same not yet dead; him no catch him wind, no blow out paint, him heap dead." The man did not blow out the paint, and the coroner was called.

The Mansfield Academy of Medicine held its annual election on the evening of May 16th. Dr. John Maglott was chosen president; Dr. J. Lillian McBride, vice-president; Dr. B. F. Harding, secretary and treasurer. The academy has spent a very pleasant and profitable year, and is now adjourned to meet in the fall at the call of the banquet committee, when some distinguished speaker from a distance will give an address, followed by a banquet, and work will be resumed.

Dr. J. L. Stevens was secretary of the Mansfield Academy of Medicine for the session of '97 and '98, having succeeded Dr. Wm. Bushnell, as shown in our list.

The Commencement of the Cleveland College of Physicians and Surgeons was held at the First Methodist Church, on Wednesday evening, May 4th. The annual address was given and the degrees conferred by Rev. James W. Bashford, Ph. D., D. D., president of Ohio Wesleyan University, the class being addressed also by Dr. Chas. B. Parker, dean. Dr. Bashford's effort was one of the ablest commencement addresses we have ever heard, both as to the matter and the manner of it. Dr. Parker's remarks were very earnest and practical.

The names of the graduates, 43 in all, are as follows: John E. Adams, Fred. Y. Allen, Hal. F. Bishop, Jotham F. Black, E. R. Bondy, Seymour C. Boor, Chas. W. Bubna, Arnold Cohen, C. Charles Corlis, F. Dahinden, Eugene B. Dyson, Ph. B., Roy C. Eddy, Joseph J. Fleming, Guy H. Fitzgerald, Norman W. Hole, B. S.; William B. Hubbell, Alex. A. Jackson, Theodore T. Jacobson, William H. Kinnicutt, Frances S. Konrad, Jay A. Latimer, Ralph W. Laubie, George D. Macleod, J. H. Moore, Ph. B.; James R. Norrel, Alvah S. McClain, B. S.; Conn R. Ohliger, H. V. Ormeroid, John W. Reakirt, Mabelle Rogers, A. Clynton Scott, Arthur Seidman, A. B.; Byron W. Shaw, Andrew J. Simpson, Robert E. Swigart, Albert Tachauer, Robert E. Taft, B. L.; Herbert T. Thornburgh, John M. Van Tilburg, Claude W. Williams, Ph. G.; Samuel A. Weisenberg, Chas. L. Wood, J. A. Yoder.

At the close of the exercises at the church the class,

the faculty and others adjourned to the Forest City House for the annual banquet, which was presided over by Dr. John G. Spenser, as toastmaster.

In the course of a considerable experience we can recall no occasion upon which each toast was so happily proposed, so wittily responded to, and so thoroughly enjoyed. The following is a list of toasts and speakers. In the absence of Rev. Dr. Banks, "The Clergy" was represented by Rev. Dr. Warner:

Wesleyan University—Rev. Dr. J. W. Bashford, president.

Pia mater.

"Plus quam se sapere et virtutibus esse priorem Vult."

The Clergy—Rev. Dr. Warner.

"Skilful alike with tongue and pen,
He preached to all men everywhere
The Gospel of the Golden Rule."

Twentieth Century Medicine—Dr. Chas. F. Dutton.

"Our retrospection will be all to the future."

The Class—Dr. Chas. L. Wood.

"In the very May-morn of his youth,
Ripe for exploits and mighty enterprises."

Naval Surgery—Dr. Geo. W. Crile.

"Duter et decorum est pro patria mori."

Law: Some of the things we do not know—Albert H. Weed, Esq.

"A friend of mine, who, in hot blood,
Hath stepp'd into the law."

The Experiences of a Faculty Officer—Dr. Chas. B. Parker, dean.

"The quiet mind is richer than a crown."

The Belmont County Medical Society meets at Bellaire, on May 27th. The following program is announced:

"Enuresis," Dr. J. O. Howells, Bridgeport, O.; "Lessons Derived from a Consideration of the Old and New Pharmacology and Therapeutics," Dr. A. H. Hewetson, St. Clairsville, O.; "Cancers," Dr. J. V. Webster, Flushing, O.; "A Case of Multiple Neuritis," Dr. J. P. West, Bellaire, O.

Dr. Charles H. Evans, who has been prominent among the members of the medical profession at Canton, ended his life with a revolver on May 12th, the day following the death of his wife.

Postpartum Hemorrhage. Macewen has "effectively controlled the abdominal aorta by throwing the weight

of the body on the aorta through the closed right hand, placed a little to the left of the middle line, the knuckles of the index finger just touching the upper border of the umbilicus. With the left hand the arrest of the blood current is ascertained by feeling the femoral at the brim of the pelvis. Only enough weight to arrest the femoral pulse is required. If the patient vomits or coughs, the pressure must be increased, lest the hand be lifted from the aorta by the abdominal muscles."

In order to compress the abdominal aorta it is not necessary, but rather injurious, to move the patient from the ordinary dorsal position. With the patient lying, as she usually does, flat on the back, the obstetrician's hand is easily applied under her without even disturbing the coverings of the bed, and avoiding exposure, which is the *sine qua non* of all remedial measures. The ulnar surface of the closed left hand — the physician standing on the right-hand side of the patient — should be laid gently but firmly across the aorta, which should then be compressed against the spine, while the right hand should feel for and compress the uterus. The hands may be changed from time to time, but the compressing hand should never be lifted until the other is in position above or below and has taken up control of the vessel. The time during which compression is needed will vary with every case, and must depend wholly upon cessation of hemorrhage and on no other factor. It is convenient and always necessary to have an assistant at hand, who may relieve the tired muscles of the original attendant. Two points are of great importance. First, inasmuch as the solar, epigastric, and mesenteric plexuses lie over and around the aorta, pressure must be shifted upward or downward from time to time. The pressure on the aorta does not matter, but too long-continued pressure on any one point of the sympathetic does. Secondly, when the pressure is taken off ultimately it must be very gradually done. The uterus should be felt to be firmly contracted; the aortic pulse should be firm, strong, and fairly slow; and the effect of releasing the current must be most carefully watched. If there is the least return of flow, the uterine ligatures are not yet to be trusted and compression must be resumed. This, then, is the primary duty. Once done and persisted in from the earliest possible moment until the desired firm contraction has been obtained and can be manifestly relied upon, the patient is safe as far as any earthly means can make her; and, with the entire

self-possession which perfect security gives, the physician can quietly and without needless hurry put into force the secondary measures which are to bring about the secondary result—namely, the firm and lasting uterine contraction.—M. W. Curran, in *Medical Record*.

Treatment of Night Sweats. Agaricin in my practice has proven to be the most successful of all drugs used in combatting this symptom, and without any disadvantages. It is not cumulative, and repetition apparently does not enfeeble its power. It is a product of the mushroom family, of the boletus variety. . . .

Its active principle, agaricic acid, may be used in one-quarter to one grain doses. Its action is fully developed in from four to five hours, and may be maintained at pleasure by repeated small doses. The method of administering it which has given the most excellent results in my hands is, as follows: Give a half-grain at the first dose and follow with an eighth of a grain every four hours until the sweating is checked; then continue its use, but lengthening the interval until the smallest quantity necessary to control the sweating is reached. In other words, get the patient under its full physiological effect and maintain with minimum doses. In no case was there any digestive disturbance, diarrhea, or intermittent pulse noted.

Why and how it acts as an antihidrotic has not been demonstrated, and as it is well given empirically, it would be well to be on our guard for any manifestations of the vegetable poisons.

My experience is limited to the treatment of eight patients, but with such satisfactory results that its use will be continued in the treatment of all cases in the future to the exclusion of other remedies. . . .

It failed with one of the eight patients only. In this particular instance the man died two weeks after coming under my care.

Agaricic acid, the active principle, is recommended, chiefly because the various samples of the drug differ considerably in strength.—R. D. Bass, in *Maryland Med. Jour.*

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Original Articles.

**ETIOLOGY, PATHOLOGY, AND TREATMENT
OF ENTERO-COLITIS.***

W. S. PHILLIPS, M. D., BELLE CENTER, OHIO.

One of the most difficult and complex problems that confronts both parents and physician is the rearing of children, and probably the worst enemy to human life during the tender years of infancy and childhood is that of intestinal inflammation in its various forms, equaling in its fatality the combined results of all other maladies to which they are subjected.

When we consider that about one-eighth of all the children born die of intestinal troubles before reaching the age of five years, we are simply appalled, and when we are assured that such fatality is the result largely of ignorance in their management we are led to infer that our boasted civilization is not many steps removed from the state of barbarism about which much complaint has been recently made.

Diarrhoea, being the prominent symptom of enterocolitis, is the term generally used to express the conditions which we propose to discuss, and it is inferred from a circumstance hereafter related that there is not so much

* Read before the Ohio State Pediatric Society, Columbus, May 3, 1898.

difference in the essential cause producing the different forms of intestinal inflammation as is usually taught, except in degree.

However, as this malady may be found under such diverse conditions, and at all seasons of the year, it may not be advocated that there is a single producing cause.

It may be assumed at the outset that all cases of entero-colitis are of germal origin, such entering as a causative factor in dyspeptic diarrhoea produced by imperfect digestion and subsequent fermentation or putrefaction of the contents of the alimentary canal, on account of the resemblance in many respects to cholera.

If it be conceded that the "spirillum" produces cholera, by analogy, we may safely conclude that causes giving rise to entero-colitis are similar, and this assumption becomes more credible when this idea is entertained in the management of infancy and in the treatment of summer troubles by the better results obtained.

Different forms of micro-organisms have been found associated with diarrhoeas, notably the streptococcus, but not with sufficient constancy to prove any definite relation, but as a possible illustration of the unity of cause in widely different forms, the following incident is presented:

A broken tile in a drain extending through a section of a town caused the surface water to back into a cellar to the depth of about four inches in the month of February or March, and which was not removed for four weeks. Afterward, everything was made clean except some boards that were piled up in an orderly way in the cellar. Late in the month of August following a musty odor was noticed about the cellar, and the board pile was removed and the cellar disinfected. The removal of the lumber spread a noticeable odor through the living rooms above. Within two weeks afterward there were three cases of diarrhoea developed, which included all the members of the family. One was simple and non-inflammatory. Another was dysentery of moderate severity lasting about a week. The remaining one, that of an infant eight and a

half months old, and fed upon sterilized milk, was a violent case of entero-colitis, terminating fatally inside of three days. All being exposed to the same conditions became ill, but with widely differing forms of trouble, evidently having a common origin. The difference in the point of lodgement, culture medium, and the vital resistance of the individual seeming to account for the difference.

As auxiliary causes may be mentioned atmospheric conditions—temperature, moisture, and velocity. It is but the common observation of every one that an increase of cases is coincident with the advent of warm weather, increasing rapidly with a rise to a mean average temperature to and above 60 degrees Fahrenheit. But it has oftentimes occurred that the hottest months of the year have not furnished the greatest number of cases.

According to the statistics derived from the observations of the Michigan State Board of Health, the increase of cases with increase of temperature is further modified by the hygrometric state of the atmosphere, an increase in the absolute humidity increasing the number of cases of diarrhoea, and which are diminished by increased atmospheric velocity. This leads to the conclusion that the specific germ or germs are influenced in their propagation and spread by certain conditions of temperature and moisture, and that human habitations are sometimes kept purified by natural air currents, hot days and cool nights especially favoring the dispersion of organic impurities from the earth, the ground air being displaced by the cooler air above it.

It is a fact of common observation, also, that the mortality rates of infancy are influenced by the sanitary conditions which prevail in and around the home or the surroundings, and in nothing is this more marked than in the summer diarrhoeas common to this season of the year. Impure air and water interfere with the activity of the vital processes generally and thus diminish the resistance to disease, and the drinking of water containing organic impurities is known to produce diarrhoea,

which paves the way for attacks of entero-colitis and also allows the admission of the specific germ into the system. The same thing is true of the nursing bottle and its appendages.

These may be considered as the external influences, but there are others equally necessary that are internal.

It is a matter of common observation that children deprived of the natural mother's milk and fed upon cow's milk and artificial foods, are especially liable. One would think from the extravagant claims made for the artificial foods that they are a *sine qua non*, but the mortality rates maintain a wonderfully steady pace in spite of their existence and constant use.

The explanation of the high mortality rate in children artificially fed and the tendency to attacks of entero-colitis is found in imperfect digestion of such food and caused by lack of proper composition, incomplete sterilization, and overfeeding. The vital resistance is weakened in the cells and the system constantly saturated with the products of fermentation, so that it may be accepted almost as an axiom that when the food of the healthy infant or child is perfectly suited to its capabilities of digestion in the way of its composition, quantity and purity there will be but few more cases of illness from this source than among adults.

The greater number of cases of entero-colitis occur between the ages of six and eighteen months. This is the period of dentition and has always been regarded as a critical period. Various explanations have been offered to account for the greater susceptibility during this period of dentition, such as unstable circulation during the time of the most active glandular development. If we admit the probability of micro origin such a hypothesis must be excluded and another submitted more in harmony with probable facts.

The teething process is generally accompanied by more or less constitutional disturbance which often interferes with the digestive process. Either the food mass does not undergo complete sterilization or the acid prod-

ucts of fermentation inflicting such injury to the epithelial lining of the intestinal tract as to readily admit of invasion.

Other forms of illness produce like results, and in the same manner. In the same category may be placed the effect of over-feeding. Primarily, entero-colitis is a local disease involving principally the colon and lower third of the small intestine. Secondly, it becomes systemic by absorption of toxins, which is one of the factors producing rise of temperature and the cause of the usual nervous phenomena, the chief of which are convulsions and active elimination as shown by increased peristalsis and osmosis.

To speak of vaso-motor paralysis will give no adequate explanation of the pouring out of the blood serum into the bowel, as often occurs, but there is an active eliminative process produced by irritation of the terminal nerve filaments and poisoning of the central nerve ganglia.

As there are no sharply defined limits between the conditions giving rise to the different dyspeptic and irritative diarrhœas, either clinical or pathological, it is as yet in the absence of exact knowledge impossible to do other than to approximate to the conditions in each individual case.

In any case there is increased peristalsis, provoked in the first place by the irritating contents of the bowel proving an offense to the nerve endings and, secondarily, by the influence of the toxin upon the sympathetic ganglia. Sometimes the escape of serum from the terminal vessels is the most prominent feature, as in cholera infantum, while in others the mucus glands are stimulated into activity.

Anatomically, the initial hyperæmia is succeeded by exfoliation of the epithelium cell infiltration, and destruction of the mucosa either by ulceration or sphacelation. Sometimes the poison seems to have an elective affinity for the glandular structures which become involved in the inflammatory process to the partial exclusion of the structures in which they are found.

In the stools, on the surface, and imbedded sometimes deeply in the mucosa, are found the streptococcus and a variety of baccilli not as yet properly differentiated.

After the surface has lost its integrity it is not improbable that the common baccillus of the colon plays an important part in the subsequent course of the malady.

From the foregoing views of the etiology and the well-known fatality of entero-colitis, it is evident that the most successful treatment is in the way of prophylaxis.

It is to be feared that many mothers seal the doom of their infant children by substituting a mess of pottage for their birthright in the fountain of the human breast, as a matter of convenience or other esthetic reasons.

It is also to be feared that the question of to wean or not to wean is often settled in the wrong way through the inability of the medical adviser to tell what the chemical composition of the human milk should be, and unfamiliarity with the methods of ascertaining that matter.

One has only to observe the difference in the results in fruit-canning, first in a salubrious and pure atmosphere, and second in an atmosphere filled with the spores of vegetable mold and concomitant impurities, to appreciate the dangers of unsanitary surroundings; and as a preliminary and essential part of the prophylaxis health boards should have the authority to close the office of every architect who does not possess an adequate knowledge of the principles of sanitation which relate to house construction. Landlords should be prohibited from building houses for tenants without a sufficient surrounding area. The United States is large enough to afford to each family of her seventy million people all the sunlight and fresh air necessary, if only properly disposed. In the absence of proper surroundings, removal to a healthy place is a prudent measure.

Inability of the child to properly digest its food during the heated term is a condition calling for earnest solicitude and watchfulness. If the child is nursed the proper composition of the milk needs confirmation by analysis, and if found to be deficient the cause may be sought for

in the mental or physical condition of the mother and remedied, if possible. Where not possible a change of nurse or resort to artificial food must be had. In the selection of artificial food the composition should be exact in order to secure the best results and varied only to suit the requirements of each individual case.

The idea of synthetic combination as suggested by Dr. Rotch is certainly the most reasonable proposition relative to infant feeding that has yet been submitted.

That the food should be sterile goes without saying. Nurses and mothers should be informed that milk once sterilized does not always remain in that condition unless properly handled, and that when once contaminated the products of bacterial invasion are not easily dissipated by heat or by other measures.

When once the mucous lining of the bowel or any part of it has become the seat of an inflammatory process the first requirement to be met is thorough evacuation of the contents. The child will have become fretful on becoming ill usually, and only can be kept quiet while feeding. Or the invasion is sudden, the processes of digestion having been active previously, the contents readily become a fermenting and decomposing and irritating mass and only fit for a culture medium, for the propagation of pathogenic bacteria, and which under no circumstances should be allowed to remain. As this mass passes more slowly through the colon than through the small intestine beyond, it is here that the principal part of the trouble will be found.

The evacuation of the contents by catharsis can be aided by entero-clysis or flushing of the colon with water at such temperature as may be indicated by the heat of the body. Water holding only common salt in solution to make it more tolerable, and if the stools are acid, as is ordinarily found, it should be made alkaline by the addition of soap suds or any other ingredient known to be harmless as well as efficient.

The employment of antiseptics in this part of the alimentary tract is useless and uncalled for, and the em-

ployment of efficient disinfectants is unsafe unless the further study and elaboration of the properties of formalin will prove it to be innocuous in solutions of such strength as to be effective.

What is expected at present is to secure mechanical cleansing of the colon and relief from the irritating contents by removal and neutralizing the acidity of that which remains.

The frequency of flushing is to be gauged by the frequency and general character of the stools—from one to three times a day. Water may be allowed freely as the stomach will tolerate to satisfy the thirst and to assist in the process of elimination through the glandular structures when absorbed, and when not absorbed, by being carried along through the lumen of the bowel. Water may also be administered hypodermically with advantage if the blood is losing its fluidity rapidly, as when the discharges are choleraic and the stomach irritable.

This loss of water from the body is evidently one of the causes of death in many cases, and what could be more rational than that it should be restored through every available channel. It works well in Asiatic cholera and certainly can be made equally available in cholera infantum.

While the administration of food is important as a prophylactic measure, it is none the less so in the actual presence of acute entero-colitis. Under these circumstances the ability to digest food is at a very low ebb, and unless wise precautionary measures are instituted the administration of food will undo every other measure resorted to for relief.

To this end the administration of milk must be suspended entirely for a time, until the function of digestion is somewhat restored, for the reason that pathogenic germs find in this medium the best conditions for their propagation that are found in any food, so that the use of milk may with advantage be suspended and pre-digested food of other character containing the requisite proximate principles cautiously given in its stead, remembering in

any case that we are prone to feed too much rather than too little. When the specific character of the disease has subsided and only the inflammatory condition remaining, and which is marked by less acute features, then predigested milk may be given.

As to the medicinal agents which may be used, three classes may be used with advantage, viz., antiseptics, sedatives and astringents. Where any two of these properties are contained in a single drug, as in the use of bismuth, something is gained in the way of convenience of dosage, but in order to get any results the amount exhibited must have some reasonable relation to the extent of surface with which it is to come in contact, its effect being purely local. Alcohol, in the form of whiskey or brandy, is a good antiseptic. It is probable that the good effects of alcohol frequently observed in entero-colitis, as well as other forms of toxæmias, are due to its antiseptic rather than any real or fancied stimulating properties.

Anodynes are to be used cautiously, stopping short of locking up the secretions, thus defeating the processes of elimination that are so much desired. But these little sufferers are entitled to that degree of comfort, necessary to conserve the vital energy that is often rapidly dissipated by this wasting disease. If after the acute symptoms have subsided there is a disposition, as frequently occurs, to continue in a subacute or chronic state, a general tonic and hygienic regimen, with the precautions in the way of feeding as already indicated, are measures giving the best promise of success.

May 3, 1898.

DISCUSSION.

DR. KELLEY: It seems strange that no one rises to open the discussion. This is too good a paper to let go without comment. On the first paper by Dr. Harper and this one of Dr. Phillips I think we could profitably spend this evening and all to-morrow in discussion. I only want to make one point that occurred to me while hearing Dr. Harper's paper, and the discussion upon it, and which

now comes up again. I wish Dr. Warner had not left the hall. He ought to be taken to task about his utterances upon the subject of artificial foods. Dr. Rotch made a great advance when he began to lay down precise rules for the feeding of children; the modification of milk, producing synthetically in an accurate and scientific manner, a proper food. The combining of cream, milk, water, and sugar in definite quantities, followed by sterilization and alkalization, I regard as a marked advance in our knowledge and practice; and it is a step backward to talk of the patent foods—to resort to or tolerate the use of the artificial foods upon the market. That is what I most wanted to say. There is a great deal more to be said on this subject, but I would like to hear some one else say it.

DR. MOREHOUSE: As Dr. Kelley has said, there is a great deal to be said on this subject. When the child's life hangs in the balance we look for something we have not yet used to turn the scale in our favor. We resort to artificial food. We are advised to try this and that prepared food. I am becoming more and more of the opinion that these foods are too natural. The children die on them just as though nothing had been done to prevent it. I prefer the child should die scientifically on mother's milk, or cow's milk prepared scientifically to resemble mother's milk as outlined in some of the papers. Meanwhile we are getting nearer the truth.

We will find an acid condition in the stools, especially in entero-colitis. It has been recommended to use large doses of bicarbonate of soda, and I believe it works well. Specifically, with bismuth we can use bicarbonate of soda—teaspoonful doses three or four times a day, made up in aromatic form with essence of peppermint or wintergreen—to neutralize this acid condition of the stools. I think it is rational, especially in cases of great need. The child is approaching a condition of collapse, the stools are increasing, and we fly to some food. Then is the time not to fly, but to stand firm and calmly use rational means. It might do well to try these foods if the child were sure to live two or three weeks while we were try-

ing. I have tried condensed milk, if that may be called an artificial food, but I have not been given to trying artificial foods as recommended by some.

DR. HANSON: In looking over this subject it is well to pay a little attention to the physiological digestive ferments that we have. What are of the greatest value in destroying germs, and in what are they produced most readily? Where are they found most commonly in the intestinal tract? In children, contrary to the general belief, there is deficient secretion of the alkaline juices. This has been shown by cases in which there has been a fistula connected with the intestine. The contents of the small intestines are nearly always acid throughout. The secretions of the organs below the stomach are not sufficient to neutralize the acidity of the stomach. Germs are formed much more rapidly in the large intestine. They are rarely found in the stomach. That being a fact, it has often occurred to me it is not a very good plan to be so ready in giving the child alkalies. The general idea that the intestinal tract below the stomach is neutral or alkaline has been disproven in at least two cases where a fistula existed down near the ileo-cæcal valve.

DR. HARPER: I believe we cannot be too careful in the beginning of a case of this kind, to rid the intestinal tract of all food that may be in it. I do not think we can emphasize too strongly that all food should be withheld for eighteen to twenty-four hours. In that way the virulence of the disease is mitigated.

In regard to the etiology, I believe in the best of health there are always germs in the intestines. It is said at birth there are no germs, but they enter quickly and at the end of twenty-four hours there are germs throughout the entire tract. Disease is more often attributable to germs than is thought. We now believe a child's stomach is merely a receptacle for food, and most food passes through the stomach without much action. In a child in fair health, in one hour after nursing, the stomach will be empty. If this is the case, a large portion of the digestion must go on in the intestine, and

trouble comes from a lack of digestion there. Germs find ground to grow in. The food has not been acted upon properly by the ferment and also the bile. The resulting irritation causes intestinal trouble.

DR. PHILLIPS, closing: In the preparation of my paper I have been impressed with two facts. One, the necessity and efficiency of prophylaxis in the treatment, and the other the absolute necessity of keeping the alimentary canal as nearly clear of undigested and fermenting material as possible in an acute attack. I have given the matter of feeding considerable attention. I cannot help but feel we as a profession are hardly as well posted as to the cause of these things as we should be, or with the accuracy in the care of foods that are given children artificially fed. For instance, we instruct patients how to sterilize and pasteurize milk. We do not take into consideration the dangers previous to milking and previous to sterilization. Sterilization is not sufficient for those toxines previously formed. That these toxines are a cause of disease has been remarked. Dr. Vaughn, of Ann Arbor, has it in his head that tyro toxicon is the cause. As has been mentioned, occasionally some fecal matter from the cow will find its way into the milk. An examination of poisonous milk has found this as a cause. Sterilization will not destroy these poisonous properties if they have remained some hours. Nurses and mothers, as well as physicians, ought to know how to make milk thoroughly aseptic.

Another thing. Disorders of children leading to serious disease occur in the way of digestion. It is a never-ending source of trouble. The care of food and the care of digestion I consider salient points in the management of the trouble. Unhealthful conditions that surround children are not looked after as they ought to be. It is wonderful the amount of filthy air and food that get down children's necks, and when we consider the unresisting character of the vital processes of childhood, we understand why they become so readily sick. Ordinarily, grown folks have their food properly sterilized, but chil-

dren are not treated to that extent as they ought to be. It is a good thing that a physician can prescribe his food to be combined as it should be for digestion. When the practice of sterilization, effectual sterilization, is insisted upon and the assignment of food has to correspond with the ability of the child to digest it, we will be in the way of a very good starting point for the treatment of this difficulty. I cannot but feel that the use of water, cold and warm, is very efficient after this trouble has started. Clear the alimentary canal and keep it clear. Keep the colon well flushed to keep the poison washed out is a very essential thing to do. As evidenced by the high mortality, medicine, I think, takes an inferior place in the management of this trouble. I do not believe it will be satisfactory in the future. This thing of hygiene and ministering to the body is the way in which we may expect to cure. Giving water is nature's way of getting rid of the poison, and we should emulate her as nearly as possible.

THE CLINICAL IMPORTANCE OF THE POSITION OF THE STOMACH.*

BY HENRY WALD BELTMANN, M. D., CINCINNATI, O.

The position of the abdominal viscera has been the source of much discussion in recent years. Careful observation has revealed the fact that some of the most important organs within the abdominal cavity are subject to pathological displacements to a degree little suspected a generation ago. Movable kidney, instead of being considered a rarity, is now known to be an exceedingly common condition, especially in the female. Descent of the intestines "in toto" as a condition to be dealt with from a clinical standpoint is a revelation of the past fifteen years. Prolapse of the stomach, or more concisely expressed, gastropexia, is a very modern concept indeed.

The *fact* of prolapse is clearly demonstrated and acknowledged on all sides. The *significance* of prolapse is

* Read before the Ohio State Medical Society in Columbus, O., on May 6, 1898.

far from being understood. There are medical writers who attach immense importance to the downward displacement of the abdominal viscera, and find in that pathological condition the root of many of the nervous and dyspeptic troubles to which women are liable. Glénard thought he had found the anatomical basis of neurasthenia and other neuroses in descent of the intestines, which he called enteroptosis. Meinert thought that gastropptosis was an invariable antecedent of chlorosis, and that chlorosis was a neurosis of which prolapse of the stomach was the indirect cause. On the other hand, there are writers who attach little or no importance to the position of the stomach, the intestines and the kidneys.

Inglis, of Detroit, has recently stated that it makes little difference if the pylorus points east, west, north or south, or whether the folds of the intestine lie here or there within the abdomen. The attitude of the general practitioner to the question is one of indifference; and a careful investigation of the position of the abdominal viscera has not become a routine procedure even in the treatment of abdominal diseases.

That the subject is one of great importance, no one who has given the matter any thought can deny. That it is a peculiarly difficult field of investigation every one who has entered upon it will readily admit.

During the past few years I have devoted considerable time in the post-mortem room and in the clinic to the position of the abdominal viscera, and beg the privilege of presenting some of the conclusions reached during that time. And first, in regard to the intestines, especially the colon: The transverse colon played an important rôle in the pathogenesis of enteroptosis as outlined by Glénard. According to him the overloaded colon drags on its peritoneal supports, the hepatic flexure is the first part to descend; this drags on the omentum and secondarily the stomach and the right kidney become displaced. Now, in the post-mortem room it is impossible to form a clear idea of the significance of the position of the colon. The position of the intestines, as

pictured in the text-books is rarely encountered in the autopsy room. The colon is subject to the greatest variations. The transverse colon is rarely quite transverse; often it is looped in capricious fashion, the turn of the loop running down towards the pelvis or up over the stomach or liver. Sometimes the colon is distended, filling a large part of the upper portion of the abdominal cavity; sometimes it is partly contracted, partly dilated. The cæcum occasionally is found high in the abdomen; the sigmoid sometimes is found in the median line or on the right side.

It is even more difficult to draw conclusions from the position of the small intestines. In a small proportion of cases the whole mass of intestines is unmistakably displaced downwards (a true condition of enteroptosis), but in the vast majority of instances it is impossible to say whether the small intestines lie normally or abnormally.

The kidneys, also, present great difficulties to post-mortem investigation. Occasionally their movability or prolapse is evident even to careless observation, but as a rule the exact position of the kidneys in the mass of retro-peritoneal fat and their movability are hard to determine with accuracy and certainty.

The stomach, on the other hand, is more accessible to accurate investigation, and we can ascertain at the autopsy just how the stomach lay intra-vitam and what relation it bore to other viscera. I have studied the normal position of the stomach in many cases in the following manner. As soon after death as possible I made an œsophagotomy and introduced a stomach tube through the œsophagus into the stomach, which was then filled with $1\frac{1}{2}$ to 2 quarts of water. The tube was then clamped and the abdominal cavity opened. The cardiac orifice is invariably fixed on the body of the tenth dorsal vertebra, somewhat to the left of the median line. The fundus rises usually to the level of the sixth rib in the left anterior axillary line, often as high as the fifth rib, lying in some instances behind the apex of the heart. The pylorus in the male lies just to the right of the parasternal

line, on a level with the first lumbar vertebra or somewhat lower. The pylorus is always movable; the lesser curvature is completely covered by the liver.

So much for the normal position, as found in the children of both sexes and, as a rule, in the adult male. In the adult female this position is met with in only a small minority of cases. In most adult women the pylorus has become movable to the extent of one to three inches, so that it can easily be drawn below the free margin of the liver. Owing to this displacement downward and to the left of the pylorus the stomach in women assumes a more vertical position than in the healthy male, and the lesser curvature, instead of being entirely covered by the liver, may come to lie in direct apposition to the anterior abdominal wall. In other words, in the large majority of all adult females the stomach is prolapsed. Prolapse of the stomach occurs also in a certain proportion of adult males, but the number is scarcely 10 per cent. of all males afflicted with dyspeptic troubles. This descent of the stomach in the abdominal cavity causes the greater curvature of the stomach, especially of the pyloric half, to lie much lower than normal, and in many cases it reaches far below the umbilicus. This fact has been one of the most fruitful sources of error in the field of digestive disorders. The literature of the past fifteen years teems with references to dilatation of the stomach and atonic distension of the stomach; and a host of physicians, under the guidance of Bouchard, have raised mountains of theory on the assumption of an auto-intoxication of the system through the retention of food in dilated stomachs. Perhaps it is a bold statement, but idiopathic dilatation of the stomach is probably a mythical disease. In certain exceedingly rare instances acute dilatation of the stomach occurs in the course of other diseases, as I attempted to prove a year ago in the *Lancet-Clinic*. Aside from these cases, dilatation of the stomach in the adult without obstruction at the pylorus rarely or never occurs. Bouchard based his diagnosis of dilatation on a succussion splash obtained below the umbilicus. Nothing could

be more fallacious. It is evident from what has been stated above that when the stomach is prolapsed a succussion splash may often be elicited low in the abdomen. No method which takes only the greater curvature into account can be considered a reliable method of diagnosing dilatation. The differentiation between prolapse and dilatation can be made only by locating the position of the lesser curvature. I shall not enter upon the various methods of mapping out the lesser curvature. The only reliable means at our command are (1) the distension of the stomach with air or CO₂ and subsequent percussion; and (2) transillumination of the stomach by means of the gastro-diaphane.

When these methods are applied to the living the same results are obtained as from post-mortem study. Prolapse of the stomach can be demonstrated in the large majority of adult women; extreme distention of the stomach artificially produced with CO₂ will usually reveal to the eye the course of the lesser curvature running below the free margin of the liver. The large majority of men have stomachs normally placed. Men of phthisical habitus, men the subject of long-standing emphysema, and others with narrow chests and long waists often present the condition of gastroptosis. In other men it is exceptional.

It is not the purpose of the present paper to enter upon the causes which produce this abnormality in the female sex. There is no doubt that corsets and skirts fastened about the waist play the chief rôle in its production. We are confronted by the undeniable fact that in the majority of women a demonstrable prolapse of the stomach does occur, accompanied in a fair proportion of cases by prolapse of the right kidney. It is our task to determine whether this abnormality produces symptoms or not, and, if so, what symptoms. The problem is an exceedingly intricate one to solve. There is no doubt at all that a large number of women though their stomachs are prolapsed enjoy perfect health. It is likewise true that many women suffer for a time with symptoms which

might be referred to gastropptosis and later recover entirely from the symptoms, though their stomachs remain in their abnormal positions. It is notorious that the very aged rarely have symptoms which could be ascribed to malpositions of the abdominal viscera, although in the aged ptosis of the viscera is very common.

It would be very crude reasoning to infer from the above that ptosis of the stomach and of the other abdominal viscera is a perfectly harmless condition. A sleepy individual is oblivious of sights and sounds which would excite him if wide awake. A person of strong nerves is not affected by irritating stimuli which would completely exhaust a neurasthenic or neurotic one.

Now, it is well known by those who have studied the question before us that the symptoms of gastropptosis lie largely in the domain of nervous dyspepsia; that they affect by predilection the neurotic and those of weak nerves; that these symptoms are apt to begin at a time when the patient for one reason or another is subjected to nerve-strain. The symptoms of nervous dyspepsia are too well known to need a lengthy description here. The patients usually complain of weight in the epigastrium following the ingestion of food; of bloating and belching. Often the epigastric distress becomes unendurable, occurring at night and disturbing the sleep. A dragging sensation in the back is common. The appetite is usually good, but some loss in weight follows the self-imposed restricted diet. The bowels are usually constipated, the tongue clear or only slightly affected.

This stage of nervous dyspepsia often lasts for years; sometimes it progresses into marked neurasthenia. This advance is accompanied by increase in the extent of the visceral ptosis; and often a state is reached in which the patients became pronounced invalids and in which the stomach, intestines and one or both kidneys are markedly prolapsed. The great clinical significance of prolapse of the stomach is this, that in those otherwise predisposed it leads to distinct nervous symptoms of a dyspeptic nature, which in turn reach upon the general nutrition and the

condition of the nervous system. Marked prolapse of the stomach undoubtedly gives rise, in some cases, to various forms of visceral neuralgia, and sensations of a dragging nature, and this constantly-aching irritation may lead in neurotic individuals to profound hypochondriasis. Meinerth thought that the solar plexus was dragged upon by the prolapsed stomach; that thereby its fibres which supply the spleen and control the formation of hemoglobin were deranged — and that in this manner prolapse of the stomach was a predisposing cause of chlorosis. This theory, though plausible if not carried to extremes, is unfortunately incapable of scientific demonstration.

Although this paper by its title is limited to the prolapse of the stomach, it is impossible to discuss gastrop-tosis without relation to ptosis of the other viscera. One-seventh to one-eighth of all dyspeptic women have a movable right kidney, and in a certain number of these same, prolapse of the intestines (however vague the term) does occur. Now, the derangement of visceral sensation produced by descent of the stomach is undoubtedly augmented in many instances by symptoms referable directly to the right kidney and to the bowels. It is impossible to dogmatize on the subject one way or another, in the present imperfect state of our knowledge.

It seems certain that many symptoms of nervous dyspepsia and of obscure abdominal neuralgia cannot be treated successfully until their origin in displacement of one or more of the abdominal viscera is recognized. The intensely practical part of this subject is that which relates to treatment — and here, as in every other case, the physician must individualize.

I could cite numerous cases of nervous dyspepsia accompanied by gastrop-tosis which have been greatly benefited by the use of an abdominal bandage; and still, an abdominal bandage is indicated in a comparatively small proportion of cases. Those patients in whom the symptoms due to gastrop-tosis have supervened upon physical or emotional strains are usually more benefited by general systemic and toxic treatment than by local measures.

In the hypochondriacal it is better to divert the mind from the abdomen than to direct attention to it. The prolapse itself is very rarely curable. All we can hope to accomplish is to overcome the resulting symptoms, and as a rule this is best done by building up the general health.

The dyspepsia often calls for special treatment. In these cases, a chemical examination after a test breakfast is often necessary to guide us successfully to a correct diet. Usually hyperchlorhydria is present in marked cases; often, however, the gastric secretions are normal, and sometimes the secretion is greatly reduced.

Especially in advanced cases of general enteroptosis is an understanding of the underlying anatomical conditions of great value in treatment. Many chronic invalids can be practically cured by overcoming the constant dragging by the viscera on their supporting ligaments. Glénard has advised for pronounced cases an abdominal bandage, laxatives, alkalis, and a meat diet, and these directions rationally carried out are of immense benefit in many instances. After some of the symptoms have been relieved, gymnastic exercises intended to strengthen the whole system, and especially the abdominal muscles, may be of value.

Each patient must be treated on lines determined by a study of the patient himself. The present paper was intended simply to call attention to the fact of gastropptosis as an underlying condition in many otherwise obscure cases, and to warn the profession against the indiscriminate diagnosis of dilatation in cases of simple prolapse of the stomach.

20 W. Ninth st.

MODERN PROGRESS IN THE TREATMENT OF GUNSHOT WOUNDS.

BY J. J. ERWIN, M. D., CLEVELAND, O.

The successful treatment of gunshot wounds requires the surgeon to keep abreast with the times in the character and condition of arms and explosives by which these

wounds are produced; and the many important and considerate facts, the result of modern investigation and research in the all important bacteriological field of study.

The two great dangers from gunshot wounds are those of hemorrhage and infection, and in this sense we understand wound infection to be the introduction into the wound of specific micro-organisms.

While this is true, the first requirement which a surgeon is called upon to meet in severe cases is the resuscitation of his patient from shock; and here it becomes necessary that he make a correct diagnosis between shock and internal hemorrhage, for while the symptoms in the cases are similar, the treatment may be directly adverse.

Senn makes his differential diagnosis thus: "In shock, the maximum symptoms appear immediately after the receipt of the injury, while in hemorrhage the symptoms gradually increase in intensity with the loss of blood."

To bring about reaction from shock, alcohol in some form, either by the mouth, by enema, or hypodermically with straphanthus, strychnia, or nitro-glycerine is no doubt the best remedy. But not enough should be given to produce alcoholic narcosis when the full effects of the drug are obtained. More positive results are from hypodermic injections, because the shock may be so great as to prevent absorption from the stomach or rectum, and fluids placed there are simply retained for a time and then expelled unchanged. When the complexus of symptoms which at first resembled shock has been determined to be otherwise, internal hemorrhage is to be anticipated. If other symptoms appear ambiguous, the course of the bullet will assist to corroborate the diagnosis.

Dr. G. W. Crile, of Cleveland, has recently conducted a series of experiments with special observations as to the causes of and effects from shock in gunshot wounds of the lower animals. The experiments of Dr. Crile have added new and valuable data to this subject. Through his kindness I am enabled to submit the following from his notes.

I found that gunshot wounds cause death in a different manner when inflicted on different parts of the body.

For example, in gunshot wounds of the brain in nearly every instance the respiratory action was immediately arrested, and it required a well directed shot involving the medulla itself to instantly arrest the heart's action. So far as the head is concerned, I have many experiments to show that the respiratory mechanism is first of all and most markedly affected and any immediate relief to a subject so shot would probably best be directed toward maintaining artificial respiration. Whenever after an injury the heart beats either very slow showing that there was powerful stimulation of the cardio-inhibitory center, or when the heart beats with extreme rapidity showing that this center was destroyed, in either case there was great danger of early death. The tendency of the respiratory mechanism to recover after maintaining artificial respiration for a sufficient time is a very hopeful feature.

" In gunshot wounds through the chest and the abdomen in a number of experiments the respirations were most markedly interfered with and in several instances in shots passing through the diaphragm respirations were immediately arrested. It is not at all uncommon in wounds passing through the abdomen, penetrating the hollow viscera but not interfering with the nerve trunks or the large vessels, to find that neither respiration nor the circulation were directly materially affected, but the most pronounced effects would appear after the leakage of the visceral contents into the free peritoneal cavity. In gunshot injuries involving the heart, there was noticed in nearly every instance a very marked arrhythmia and it was found that the arrhythmic feature of the cardiac action made a grave prognosis. Generally speaking, then, so far as respiration is concerned, a slow sighing movement I would regard as an extremely grave symptom, especially when there is noted a disparity between the pause and the inspiratory phase of the respiratory act. That is to say, if there is a long pause, then a quick,

powerful inspiratory effort, as a rule the respiratory center was approaching a break-down.

"As to the treatment of the respiratory symptoms, artificial respiration, pure oxygen breathing, the alternate application of ice and of heat together with strychnia proved to be most efficacious in the experimental research. As to the heart, hypodermic injections of strychnia to sustain the centers in the medulla together with the horizontal posture, and if necessary the head, inclined posture seemed most efficacious. From a number of experiments, I feel quite convinced that aside from these general indications that the heart did not well bear over-stimulation. It was easy enough to temporarily raise the blood pressure, but in a short time the stimulating effect of the drug would wear away and the circulatory apparatus would act more feebly than before. That is to say, the administration of powerful stimulants in large doses seemed to defeat rather than to promote recovery."

Prompt and direct treatment of visceral traumatism by section and direct means of hemastasis will save thousands of lives which would otherwise result in speedy fatality. While operations requiring abdominal section should be consigned to those possessing special skill, yet as a life-saving measure every surgeon should possess that degree of moral courage as would forbid him to hesitate should prompt action seem to demand such heroic means; and one who has courage, good judgment, and a comprehensive knowledge of the proper steps in diagnosis and treatment should not demean himself by failing so to act.

Where operative interference is inconvenient or impossible, the patient must be kept in a recumbent position, and not allowed to make the least muscular exertion. Indeed everything should be done to induce the formation of thrombosis and preserve as much blood in the vessels as possible. Constriction at the base of the extremities to lessen the supply of blood in the bleeding vessels, and weaken the heart action against breaking down the clot; pressure over the seat of injury, or any other rational means which serves the desired end should be observed.

Anything which increases the heart's action lessens the chances of recovery. In contrast, the weakened action of the heart from loss of blood, together with that following the shock, will conduce to the stopping of hemorrhage. In less severe cases, before the patient can be removed to a place where proper inspection can be made and adequate dressings applied, hemorrhage may many times be stopped and the wound protected from infection by plugging as quickly as possible the orifice of the wound temporarily, with aseptic or antiseptic gauze, and applying a bandage tightly. If the location of the injury is such as to prevent bandaging, the plugging will assist coagulation by intercepting and retaining fibrin in the meshes of the gauze.

Because it is true that paralysis of one or more of the principal nerves in a limb, and other undesirable results have been known to occur from a too severe, bungling, or long continued application of the elastic constrictor, it is well to observe that in controlling hemorrhage in this way the limb should be compressed at a place where the main nerves are adequately protected by muscle, and that such compression should not be applied beyond a point where it is necessary to realize the object for which the compression is made. It is advisable, too, to use an elastic band at least an inch in width, to bring each turn down upon the limb without overlapping and to not continue the constriction beyond a limit of six hours. Rubber tubing may be used in strictly emergency cases.

In the control of hemorrhage from certain glandular organs when they shall have been injured, the ingenuity of the surgeons will at times be severely tested. In such cases, Von Bergman recommends the suture for closing wounds of the liver. Glisson's capsule, he asserts, is sufficiently strong. Senn recommends the round needle in suturing vascular organs, because the punctures are less liable to bleed. He also recommends splenectomy when the tampon will not control hemorrhage from wounds of that organ, as the tissue is too friable for suturing. The same will apply to others when the struc-

ture is of like character, and the antiseptic tamponade will not suffice, or the blood supply cannot be tied off.

It is obvious that the characteristics which attend upon the treatment of this class of injuries involve principles peculiar unto themselves. A gunshot wound, wherever received, under whatever circumstances it is inflicted, or environments by which it is surrounded, is always a gunshot wound, is like no other wound, and must be considered as such only.

Nicholas Senn has laid down three principles which he would have observed in caring for these cases. First: prevention of wound infection; second: conservative treatment of gunshot injuries of the extremities; and third: prompt and direct operative interference in the treatment of penetrating wounds of large cavities. When a casualty has first been brought to the attention of the surgeon, a study of the pulse, respiration, the amount of shock, the amount, character and appearance of hemorrhage which indicates the necessity for and manner of action, the signs of interference with nerve plexus or nerve trunks, etc., etc., will usually give to the observant one sufficient and reliable information without resorting to the probe, which oftentimes becomes an instrument more destructive to life than the missile which inflicted the primary injury, because of liability to increased traumatism, and adding infection to the wound. Physical signs will indicate the amount of injury to vital organisms. For example: One peculiarity which marks gunshot wounds of the head is that the immediate effect of all such injuries, whether the skull has been broken or not,—in the concussion which follows, aside from general shock, the pneumo-gastric center and the respiratory center show signs of inhibition or paralysis. It may also be well to remember that those parts of the brain which have well known localizing functions do not give any evidence of injury through their specific functions until the general signs of concussion have passed off.

A point for determining the amount of lesion may be observed in the fact that moderate concussion will retard

the heart's action through cerebral anemia, produced by active contraction of the vessels; and that in intense concussion, as from laceration of the brain, the pulse is accelerated from cerebral hyperemia caused by paralysis of the vessels and loss of vascular tone.

The amount of distress noticeable in the injured, coupled with corroborating environments, is of importance. All things being equal, the degree of pain is proportionate with the length of the wound. While there is no reliable difference between the wound of entrance and that of exit, wounds with ragged, crushed borders are less painful than those devoid of like disturbances. Burger found that the sensibility of the cutaneous surface near the wound was in a large number of cases very much diminished. Comminuted wounds with displacement of bone-fragments pressing against nerve fibres are among the most painful.

Another diagnostic point not to be lost sight of is, that pain complained of, the source of which is readily identified, indicates less injury than where little distress is manifested. Slight forms of injury rarely give rise to symptoms other than that of pain. Struck by a ball spent, or nearly so, the injured suffers more pain than were he wounded by a missile with a high velocity and great force of impact. Hence it not infrequently happens that a person injured by a ball within the third or fourth zone becomes at once possessed of a highly exaggerated idea of the nature of his injury; while another, struck by a projectile which possesses its full penetrating force, will scarcely realize, as far as any local evidence from the seat of injury is concerned, that he is injured at all. He feels only a sense of something depressing having occurred which has disturbed his equilibrium, bewildered his mind, and caused a sense of great anxiety. Thus the velocity of the new missile will mitigate to a great extent the degree of pain, as well as the occurrence of shock, and will render death in fatal cases comparatively painless.

When caring for cases where operative interference

is necessary, we will assume that when it is necessary to do anything in this way, as in the securing of a bullet or the controlling of hemorrhage, it is equally as important that preparation be made in accordance with the probable necessity. It would be a rational conclusion to assume that all probing, or other mechanical interference without such preparation as would secure the desired relief when the necessities were determined, would be more than useless, in that they would conduce to greater injury through sepsis and traumatism.

The first to teach that gunshot wounds were as a rule not poisonous wounds, was the great Ambrose Paré, and practically his suggestions could be accepted to-day in surgery of the most modern type. He taught that a bullet wound *per se* is dangerous only in proportion to the damage which has been inflicted in its course. This is to be tempered by the fact, as has been seen, that bullets are liable to have become contaminated with pathogenic microbes, and that the same do infest the surfaces of the injured part, or the coverings with which the wounded member may be invested. But this same was true when this teaching was offered; only mitigated now by the smaller caliber of the missile inflicting the injury, and no relief will be secured by chancing additional sepsis through the unwarranted use of the probe. Infected or innocuous, as the case may be, the injury which a bullet may do, has been done during its course through the tissues; and subsequent harm is mostly due to unnecessary interference; for experience has abundantly proven that a bullet imbedded in the tissues remains there, an offensive substance.

The diapedesis or ubiquity of the leucocytes affords great advantage for the destruction of the few pathogenic microbes which may be carried into the wound and forced into the tissues by the passage of the projectile, or the toxine by them produced after lodgement. When such a condition prevails in any part, these leucocytes move toward the contaminated part and proceed to devour the bacteria they there meet; and the isolation and distribu-

tion of the bacteria by being forced into the tissues, enables them to be more easily overcome by the phagocytes. If the stock of microbial toxine is not excessive, such slightly contaminated wounds are thus purified and resolution easily effected. If more numerous, a certain number of the leucocytes die from the excessive poison, and their accumulated bodies form pus which proportionately retards the process of healing. When the leucocytes shall have finally accomplished the destruction of the pathogenic bacteria, the malady is stayed and the wound healed.

Rayher, in his report some years ago, clearly demonstrated the value of the non-operative course in gunshot or compound fractures practiced during the campaign in the Caucasus. He proved by practice that primary antiseptic occlusion produced better results than had ever been produced, or has since been attained in any other way. And the altered character of wounds by missiles of modern pattern has not changed conditions which would modify these conclusions, as *per se*.

More recently (within the new era), 1876-1897, Kol-ler (H. F.) Leipzig, conducted a series of experiments comprising six grades or classes where observations were made covering the most improved forms of antiseptic, and graduated to reach the most simple, where the wounds of entry and of exit were immediately closed by sutures and dressed in a manner to prevent secondary infection.

Space will not admit of quoting extensively from the records of this experimenter. The point at issue, however, will be served when we know that first of all the experiments, the most favorable results were obtained when the means employed were as quoted above, and second, that next in order came those where simple drainage was employed. In his explanation of these results, the author has to say:

"It is very natural to ask why the central animals, in which the wounds were immediately closed, and those in which simple drainage was employed, did well, while after thorough disinfection . . . serious results

followed. It would be supposed that the more thorough the disinfection of the wound canal the less harm would result from the micro-organisms carried into the tissues by the bullet. But it must be remembered that these bacteria are not only deposited in the canal itself, but are forced into the neighboring tissues, and are in consequence not destroyed by disinfection of the wound canal, however energetically it be carried out. On the contrary, the agents used to produce disinfection, diminish the vitality of the tissues surrounding the canal, and render them favorable media for the development of the germs of disease, forced into them by the pressure of the bullet in its passage." . . . "The whole question of infection in this class of injuries depends, therefore, upon the number and virulence of the germs implanted in the tissues by the bullet; and although these may be so numerous and pathogenically active as to cause a fatal sepsis, yet of all forms of treatment simple drainage and the protection of the wound against secondary infection affords the best chances of a satisfactory result."

Conservative surgery, with antisepsis, is most to be considered in all cases. When doubt arises where useful members are to be sacrificed, all things being considered, give the patient the benefit of the doubt.

But surgeons, like others who deal with things of vital import, should not be extremists. In proof thereof I wish to call attention by illustration to a few cases where interference is justifiable for the removal of missiles, and other disturbing conditions, using the X-ray, wherever available to first locate the foreign body. Bullets should be removed, first, when the indications are that they are doing harm by their presence; second, when their removal will add to the comfort and improve the appearance of the afflicted; and third, when the patient insists, against your judgment, and is willing to abide by the consequences, should they result as had been advised.

In casualties inflicted with the ordinary firearms of the civilian, fragments of clothing are often carried with the bullet into the wound. With the new rifle ball this

liability is diminished through the celerity and contour of the projectile. When the environments surrounding the injury would preclude such a condition, due attention should be given for their thorough removal. This should receive especial attention where joints are involved. In large joints, like the knee-joint where these bits of clothing are supposed to have lodged, they should receive sufficient exploratory attention to ascertain the facts, and remove all such irritants. This at times is rendered more difficult from the fact that, from the various densities of bone in joints, the wound may be rendered complex. Do not hesitate to enlarge the wound, observing antiseptic precautions, when necessary. Remember that one filthy shred of clothing, one strip of contaminated integument remaining in a wound, however small, will do more harm than a wound many inches long in the soft parts, when it is kept aseptic. When thorough disinfection has thus been observed, avoid secondary operation, perhaps amputation by the use of gauze drainage and immobilization of the limb. Antiseptic precautions and perfect immobilization are the all-important elements to be observed in treatment of compound fractures and penetrating injuries to large joints at all times.

The use of the cautery should never be applied in the treatment of tubular wounds. When the occasion is necessary, and probes are to be used, adaptibility is important. The surgeon should supply himself with a variety of sizes corresponding with the caliber of the weapons most commonly in use; for it is a fact worth noting that a false passage is more likely to be made with a small, than with a large instrument, and that the probe which most accurately fits the tubular channel made by the ball, will be most easily directed to the place of its lodgement. This will also be made more easy by first placing the part and tissues of the body as nearly as can be determined in the exact position they occupied when the wound was received.

"Now," says Dr. Senn, "employ no more force in using the bullet probe than in passing a catheter." This

he considers a cardinal rule, "to which there should be no exception."

When the bullet has passed nearly through any part of the body and can be otherwise located with any degree of accuracy, it should be extracted from the opposite side without exploration of the wound canal. In cases where the presence of the bullet is incompatible with good results, an effort should always be made to remove the same — enlarging the wound as becomes necessary to follow its course and to facilitate its extraction.

In penetrating wounds of the cranium, operative interference is indicated in every case for the removal of fragments or spicula of bone, foreign substances, including the bullet itself when found practicable, and to stop hemorrhage. Except when the presence of a foreign body has been shown to have affected such degenerate and destructive changes in the brain substance as to warrant the surgeon in making an effort, when the occasion seems favorable, to relieve the patient from consequences which are liable to follow, the additional danger which a thorough search for and removal of a missile from the brain will inflict, must be taken into account. Be very conservative with the probe in injuries to brain tissue. Do not attempt to force a ball backwards through a wound canal, grasped with a bullet forceps. The additional enlargement of the foreign body by the forceps in which the ball is held will bring too great a pressure upon the brain tissue, producing grave consequences. The surgeon should bear in mind this fact, that with the exception of cases where the ball has passed through the brain and lodged in the bone of the opposite wall of the skull from which it may be removed by a counter opening, and those in which it has passed but a short distance into the cerebral tissues where it may be found readily within reach, as well as those instances where it has lodged between the dura mater and the skull, a successful attempt at locating and removing the body has proven to be of rare occurrence. Von Bergman gives it as a rule to follow in these cases, "Where no symptoms are present, no

operative interference is necessary; but immediate and severe symptoms of irritation, such as contractions, epileptiform convulsions, monoplegia, etc, justify operation."

In the use of antiseptis, Adamkiewicz has shown by experiments on dogs that antiseptics should not be applied to the brain substance. Hence it becomes necessary where operative interference is attempted to use simple sterilized water, a sterilized normal salt solution (6, 5%), or at the most, a three per cent. boric acid solution made with sterilized water.

HYGIENE FOR THE SYPHILITIC.*

BY C. TRAVIS DRENNEN, M. D., HOT SPRINGS, ARK.

President of the Hot Springs Medical Society; Member of the Arkansas Medical Society; Member Alumni Association, Rush Medical College; Vice-President Tri-State Medical Association; Member of the Mississippi Valley Medical Association, American Medical Association, etc.

If any one of our hearers will open a modern textbook or treatise upon syphilology, he can not fail to be impressed with two things: The one is that of calling attention to the all-importance of caring for the patient's general condition from an hygienic standpoint; and the other is that of summarily and peremptorily dropping or relegating to the background the whole subject matter proper, whilst the portion which is given to treatment deals almost exclusively with how and when to give this or that preparation of the iodine or mercury compound; just as if every one did not know, who knows anything at all about the matter, that in the administration of these drugs every patient proves a law unto himself, and must ever be looked upon and regarded as such.

I cannot, within the limited space of time allotted to me in this paper, do more than hint along the line; but when I say that the vast majority of all of the old broken

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down syphilitics who visit the Hot Springs of Arkansas daily are much more in need of hygiene than large and unlimited doses of mercury and the iodids (which I am sorry to say in many instances they get), I believe I am only stating that which has proven to be true, from my observation and experience.

The change of climate, the change of diet, both mode and manner of living, with regulation given to bathing, the drinking of the waters, and mountain climbing are each of such value that they might be properly regarded as the equal of either of the so-called specifics.

I would not be understood as unwilling to grant to mercury and the iodine preparations that credit which every syphilographer must accord to them, but wish to impress the statement that the only way to health is to be found in following the homely road of correct habits.

The care of the teeth and mouth of every syphilitic is of such great importance that I cannot leave the subject without a few remarks.

Every one should visit a competent dentist at least every ninety days, and most of all the syphilitic; his teeth and gums should be put in proper condition, after which if he will take the trouble to rub and scrub the gums from four to six times daily with a strong, heavy toothbrush he will be able to stand very much larger doses of the drug without producing ptyalism than he could possibly do otherwise—a point of no mean value should it become necessary to push the drug. I know of no drug that can be constantly used with such continuous good effect as boric acid, and this I use in a saturated solution, always after the brushing of the teeth and cleansing of the mouth and throat. I may add here that it is about the only drug with which I am familiar that can be used upon the teeth and gums without producing deleterious effects.

I now have under care a young man suffering with a chancre involving the lower lip and a goodly portion of the chin, which became phagedenic upon the sixth day of its presentation after the administration of mercury, with

resulting pyalism — all due, in my opinion, to the failure of his family physician to attend to this particular point, and possibly to the irritation produced by the application of nitrate of silver.

It is needless to dwell upon the importance of the administration of baths, since every physiologist knows what a very important part the skin plays in the make-up of the human economy; likewise the clothing. "Cleanliness is next to godliness," and stands out here like Fastnet Light by which to guide the ship we call Health safely into harbor.

The drinking of water may be properly classed as an hygienic measure, and one concerning which, notwithstanding its great value, little attention is ever given.

No one, whether syphilitic or otherwise, should ever drink more than one glassful or cupful of any liquid during his meal, for the reason that digestion is impeded by dilution of the gastric juice, and "bolting" of the food is encouraged, which robs the stomach of the saliva which plays such an important part in the digestion of the starchy foods. For the same reason at least forty minutes should elapse after the drinking of water before the meal is taken, and from two to three hours more should again elapse before the drinking of water is to be resumed; at which time, however, several glassfuls taken at stated intervals, say every twenty to forty minutes, may be drunk with decided benefit to the digestive organs and act as an eliminator through both the skin and kidneys.

The advantages of mountain climbing, horseback and bicycle riding, athletic sports, not too violent, are too apparent to need more than passing mention. With these hygienic means at our command the internal organs at once begin making war upon all forms of disease, as a rule, and syphilis in no wise proves the exception.

The only method by which we may ever hope to lead to health the syphilitic, with our present knowledge of this disease, lies in the old principle of nutrition and elimination; and this can only be done through and by a proper regard for the laws of health.

Unfortunately, empiricism, with her cold and slimy fingers, has invaded every branch of rational and scientific medicine, and has proceeded to throttle and choke her every movement, as it were, so that now she stands aghast, pale and sick, afraid to move lest she stumble and fall over some nasty anti-this, or anti-that, or some other old thing equally useless and nauseating to those who are forced to swallow them.

The best practitioners of the day are those who use the fewest drugs and know full well the laws of physiology and hygiene and their real value.

If there be one thing more than another which will ever leave the medical profession the butt of ridicule and place us in the light of asses complete, it will be our constant rainbow chasing with the one hand filled to the full with drugs innumerable, and the other upholding this inscription,—“If not enough to kill I will consult another manufacturing chemist.”

Poor old Hygiene—you are the modern Cinderella of scientific medicine, and are modestly conscious of your ignorance of these high matters, but you light the fire, sweep the house, and provide the dinner, and are rewarded for your kindness by being told that you are a base creature and wholly unfit to commune with your more fortunate and favored brothers. But in your garret you have fairy visions out of the ken of the pair of shrews who are quarreling down-stairs. You see the order which pervades the seeming disorder of the world—the great drama of natural law, with its full share of pity and terror, but also with abundant goodness and beauty unrolls itself before your eyes. For you have learned the lesson, in your heart of hearts, that scientific medicine can only be made to attain that high degree to which she naturally aspires and is properly entitled to, through a clearer insight into the workings of physiological laws which do and must ever govern mankind and his afflictions.

A SUMMARY OF CERTAIN STUDIES IN THE MORBID ANATOMY OF EPILEPSY.*

BY A. P. OHLMACHER, M. D.,

Director of the Pathological Laboratory of the Ohio Hospital
for Epileptics, Gallipolis, Ohio.

It seems especially appropriate to bring before the State Society this first verbal report upon a line of investigation now being prosecuted in one of Ohio's hospitals in a laboratory supported by State endowment. This work, which was begun under its present directorate at the Ohio Hospital for Epileptics last July, has as its principal motive the study of epilepsy, though no intention exists of narrowly confining it to this particular purpose.

When the work was inaugurated it was determined to approach the problems surrounding the pathology and etiology of epilepsy entirely unprejudiced by preconceived theories; to be non-committal to the uric acid hypothesis, uninfluenced by the claims of doubtful alloxuric bodies, and conservative upon the other aspects of the now popular auto-intoxication theory.

The plan proposed for the work was, first of all, to subject to exhaustive scrutiny the material obtained at autopsy, in the hope of ultimately establishing what has always been lacking as a rational foundation for the study of epilepsy; that is, *a morbid anatomical basis*. With its seven hundred patients representing all varieties of epilepsy and the epileptic insanities, and with an available autopsy material of from 20 to 30 cases annually, no better field than this institution for our study could be found on this continent; and in this connection I cannot forego the opportunity of publicly expressing my sense of obligation to the enterprising manager of the hospital, Dr. H. C. Rutter, and to the Board of Trustees for their broad-minded policy in establishing a laboratory to utilize this vast and valuable material, nor can I fail to record my admiration for the steadfastness with which they have pursued this pioneer step in the face of many obstacles.

* Read before the Ohio State Medical Society, May 5, 1898.

One who will review the literature bearing upon the pathology of epilepsy will be struck by the meagerness of the reports upon post-mortem observations, especially when scrutinized by the exactness and detail demanded by modern pathological research, and it may be that our good fortune in finding some hitherto undescribed and striking gross pathological conditions is due to the application of more thorough methods. Be that as it may, it is a fact that in eight out of the eighteen cases, which have been examined post-mortem since last July, a peculiar series of anatomical alterations have been encountered.

The eighteen cases which came to autopsy represented various types of epilepsy, as, for instance, idiopathic *grand mal*, irritative or Jacksonian epilepsy, the epilepsy of dementia, of idiocy and imbecility. Naturally various lesions were found in these cases, some of them extremely interesting, and the inconstancy of the gross pathology in the cases of secondary epilepsy of dementia, imbecility and idiocy, and of the Jacksonian type, seems to be precisely what would be expected from the clinical manifestations. The full detail of the study of the first six of these cases was given in the Bulletin issued by the hospital in January last; and in another Bulletin to be issued in midsummer the result of the clinical and pathological study of the eighteen cases will be fully recorded.

In the eight cases, however, the gross pathological findings, which should be especially emphasized at this time, may be summarized as follows: A persistent and enlarged thymus gland; a pronounced enlargement of the intestinal and splenic lymph follicles; a more or less pronounced hypertrophy of the lymphatic glands; and the lymphadenoid follicles of the tongue, larynx, trachea, esophagus, tonsils, and even of the stomach; a narrowing of the arteries; an abundant development of fat; and certain osseous changes indicative of old rickets. Not all the abnormalities comprehended in this summary were present in a single case, though the persistent thymus, with one or several accessory features added, was constant. The patients were young adults, varying in age

from 17 to 35 years. All of them, except one, suffered with epilepsy from childhood. In at least six of the cases, the clinical histories were those of idiopathic *grand mal*. Four of them had periodic mania. One man died from maniacal exhaustion; one committed suicide; two of the women and one man were found dead in bed after having retired in apparent good health, which is to say that out of eight cases there were three cases of *sudden death*.

The most prominent anomaly in these cases was the large thymus body, and it was this peculiarity which led to a study of the literature in which at least two other morbid conditions were found with the same anatomical features as presented by our epileptics.

These conditions are laryngismus stridulus, or "thymic asthma," as the Germans call it, and sudden death in adults with no assignable cause. Both thymic asthma and its sudden fatalities in infancy, and thymic sudden death in adults are conditions of extreme interest, and they are quite as mysterious in their causation as epilepsy. In reviewing these subjects it was found that thymic asthma had been classed among the partial epilepsies; and in the report upon four of our cases in the January Bulletin, the attempt was made to trace a clinical, as well as anatomical, analogy between thymic asthma and thymic sudden death, and epilepsy.

Taken in their entirety, the morbid anatomical conditions which were found in our eight epileptics, and which have also been found in thymic asthma and thymic sudden death, make a picture of what the German pathologists style "the lymphatic constitution." Here the persistent and hyperplastic thymus is not the only important feature, for aside from it there is a general lymphatic hyperplasia and a narrowing of the arteries, and often evidences of rickets. How this peculiar morbid condition, which has been described more or less perfectly for nearly a century in connection with laryngeal spasm and sudden death in infancy, is related to the clinical symptoms and letheal ending is not known, and this is pre-

cisely the case in relation to our work, in which the same condition has been shown to be present in a certain proportion, at least, of cases of idiopathic epilepsy. To account for these singular anomalies in their relation to the malady, which we know clinically as idiopathic epilepsy, must, at present, be a purely speculative task; and speculation has too long held sway in the theories that have been advanced to account for this mysterious disease. What we most need in the study of this affection is, as has already been said, a firmly established morbid anatomical basis, and when such a foundation is fully developed, the time for experiments along certain lines suggested by the morbid anatomy will have come. To establish such a basis the thorough study of a large material by all the methods of modern pathological research is necessary, and to this end the work now in progress in Ohio's great colony for epileptics is aiming.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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VOL. XIII.

JUNE, 1898.

No. 8.

Editorial.

MILITARY HOSPITALS CARRIED ON BY INSURANCE COMPANIES.

Life insurance companies in various parts of the country, as well as their national association, have taken steps looking toward the establishment of hospital service for the care of policy holders who are sick or wounded in the army. A meeting in New York is to be held, or by this time has been held, to take action on the question. The principal features of the project are indicated in a circular letter which Thomas H. Bowles, President of the National Association of Life Underwriters, sent to all the life insurance companies in the United States

asking them to coöperate. Here is an extract from the letter:

“ In the line of progress and scientific development, that has so marked the history of the American life insurance companies of to-day, it would appear only natural and proper that the scope of their usefulness should be extended at this time in a patriotic effort to give care and protection to those of their policy holders who may be called to battle, in providing a hospital service for those who may become sick and wounded. While the Government will provide such service, as far as possible, the insurance companies can offer valuable aid in looking after those of their own holders. In the event of an extended war in Cuba, it might be decided to locate a hospital at Key West and one on the island of Cuba. Buildings more or less suitable for this purpose could be rented, and with slight modifications be made available for the sick. This hospital service could also be made a bureau for the companies in preparing death-proof papers and paying claims, in all cases of death among the policy holders—a convenience at once for the companies and for the beneficiaries of the insured.”

Business enterprise is commendable, but there is a limit to its usefulness. We do not think the time has yet arrived when the Medical Department of the U. S. Army needs either the assistance or the surveillance of the insurance companies to insure efficient service. There could be no objection to the establishment by the Underwriters of a bureau for securing information in regard to injuries or death of policy holders, the payment of claims, etc., or in their aiding the Red Cross Society, the D. A. R., or similar organizations, in such work as was done by the Sanitary Commission during the Rebellion, in securing supplies of delicacies and various comforts and attentions for the sick in the army hospitals. But that is quite different from the establishment of hospitals, which, of course, involves a distinct medical service—not likely to be an improvement upon those organized and maintained by the United States Govern-

ment. If the time ever comes when it is necessary for the President and the army and navy to sublet their contract of carrying on the war to the enterprising "yellow" newspapers, or even for the commissary department to go out of existence, while DeKlyn or Weisgerber step forward to cater to the troops from Ohio, then it will be time enough for the insurance companies to set up military hospitals and supersede or supplement the Medical Department of the Army.

DEAD BEATS.

778 CENTRAL AVE., Cleveland, O., June 18, 1898.

DEAR DOCTOR:—

I suppose you have noticed in the *MEDICAL GAZETTE* and elsewhere the plan proposed by that paper for the suppression of the dead beat.*

Do you not feel it would be a big saving in time, trouble and worry to yourself to eliminate that element from your practice?

If you are interested in this, will you not encourage this movement by letting us hear from you?

Will you not become a missionary among your medical friends, and secure their coöperation?

Very respectfully yours,

[Dictated.]

WILLIAM CLARK, M. D.

DEAR DOCTOR KELLEY:—

This is one of many letters I have sent out to my friends in the profession.

I find it hard work to push this, owing to indifference among the men.

Many are enthusiastic, but it is only momentary. I am beginning to believe they approve simply to be polite. Either that, or the medical profession is most d——ably negligent.

Concerning that letter you wished me to write, I will try and send it later, but would much prefer you to do it as I am getting disgusted fighting other men's battles and seeing no results.

WM. CLARK.

The above letters explain themselves. On reading them we were reminded of a passage in Max Müller's "Reminiscences." Professor Müller says that when he lectured for the first time on "The Science of Language," he had to dispose of what was then an article of faith; namely, that all the languages of the world are derived from Hebrew. He gave a whole lecture to this question;

*See Editorials and Correspondence in the March and April numbers.

and when it was over, an imposing old lady came up to shake hands with him and thank him. "How delightful it is to know," she continued, "that Adam and Eve spoke Hebrew in Paradise, and that all the other languages of the world, English not excepted, have come out of Hebrew and out of Paradise." "I really felt very much humiliated," says Müller, "and when Faraday came up, I told him what had happened." "Oh, you must not be discouraged," he said; "I hardly ever lecture on chemistry without an old dowager coming up to me with an incredulous smile, and saying, 'Now, Mr. Faraday, you don't really mean to say that the water I drink is nothing but what you call oxygen and hydrogen?'" "Go on," he said, "something will always stick."

Now the application of the story is not that doctors in matters of business are like the stupid old women studying philology or chemistry—it would hardly be polite to put it just in so many words. But we wish to repeat to Dr. Clark, Faraday's words to Müller, "You must not be discouraged. Go on! Something will always stick." It is a very simple and insignificant wrong that is to be righted by the first effort of the reformer. A foe that is worthy of our steel will not yield without more of a fight than that. Why, there are some points we have been contending for during the last dozen years, and have not won yet—but we will! There are other points and principles which we have striven in these pages to establish or maintain, in which we have made an indelible impression and won visible, palpable and lasting results. What though they be "other men's battles" we are fighting? So much the better. That clears us at once of any charge of self-interest. Are not scientific truth and the welfare of humanity and the upbuilding of our profession nobler objects for our endeavors than anything we might accomplish merely for the benefit of self?

It sometimes takes a tediously long time to lodge permanently in the minds of men ideas which lead to conviction, and result in purpose and spur the will to take decisive action. We cannot always at once see the

results and our efforts may seem to take no effect. But let us go right on, Dr. Clark. "Something will always stick."

Periscope.

Bile-coloring : Rosin, *Wiener klin. Wochenschr.* 11, 269, recommends a modification of Smith-Maréchal's test for bile-coloring in urin. The fresh unfiltered urin is layered with one per cent. tincture of iodin, whereby if bilirubin be present a grass-green ring is formed as a line of demarcation. The test is very delicate and occurs when others fail. Alkaline urin must be made slightly acid with dilute acetic acid.

Angina pectoris : Huguenin, *Journ. de Méd.*, 1897-98, warmly advocates amyl nitrite during an attack of angina, administering it by inhalation, beginning with 4 drops, later 6 to 8 drops on a handkerchief. He recommends that it be constantly carried in appropriate glass bulbs. In protracted seizures he gives it repeatedly or trinitrin hypodermatically. For internal administration he uses 3 drops, increasing to 6, in water. Externally small blisters are used on the chest. Between the attacks the following diet is allowed: White meat, eggs, vegetables, milk, mineral water and tea. Alcoholics and tobacco are entirely and permanently forbidden. Further medication consists of digitalis, caffeine, particularly iodin preparations, iodid of potassium for a month, iodid of sodium for two months or even a year. When troublesome after effects of iodides he proposes 10 to 15 drop doses of tincture of iodin in water or soup before meals.

Truss : Karewski, Berlin, *Deutsch. med. Wochenschr.* 7, has for two years used a truss with a regulatable glycerin pad, for difficult retainable herniæ. The advantages claimed are a firm but elastic pressure, distributed over the entire opening, further the use of a relatively small pad, finally a firm and satisfactory fit.

Dermatitis : Frickenhaus, *Monatschr. f. praktische Dermat.* 97, Bd. 25, Nr. 10, has found the local application of ammonia water or 50 per cent. potassium hydroxid to the blisters with a small bit of cotton batting on a sliver of wood to rank next to carbolic acid and corrosive sublimate. After the blisters have dried collodium is used. The irritation occasioning jerking is immediately relieved after

one or two applications. In a few days desquamation takes place.

Eczema: Edlefsen, Hamburg, *Therap. Monat.* 98, 2, in chronic eczema of the fingers and hands in factory laborers advocates penciling once or twice a day with the following solution: Iodin, 0.1; potassium iodid, 0.25; glycerin, 12.5; after using he wraps in clean linen.

Obesity: Affanassieff, St. Petersburg, *Klin Therap. Wochenschr.* 6, 2, 98, warmly sanctions the use of thyroid preparations. According to him there is nothing to fear in vigorous persons. In such as are troubled with heart affections "dilatation, weak pulse, slow circulation," it is to be used with caution, combined with cardiacs and diuretics. The best results were obtained with Merk's preparation, in doses of 0.2 to 0.4 g.; the least bad after effects from Baumann's Iodothyryn, dose 0.3 to 0.6; Poehl's preparation, 0.6 to 1.0, was also used. From time to time the treatment is to be interrupted, particularly with the advent of thyreodism "headache, palpitation of the heart, debility, shivering, nausea," a daily loss of 100 to 200 g. is sufficient.

Strychnin Poisoning: Habel, *Weiner klin. Wochenschr.* 9, reports a case seen 3 hours after a poisonous dose had been taken. Treatment consisted of washing out the stomach with 12 litres of water and the administration of black coffee, also 10 drops of tr. iodine every 2 hours. Recovery perfect in 12 days.

Uremia: Laache, Christiana, *Deutsch. med. Wochenschr.* 9, reports 3 cases of Uremia "as the result of pyelonephritis, chronic nephritis, acute nephritis," in which all three cases were saved by active blood letting. In 1 case 1,000 c. c. of blood was removed, complete anurea having existed, in the other 2 cases, 500 and 600 c. c. respectively were let.

Vomiting: Piek, *Medico* 8, recommends menthol, 0.05; cognac, 40.0; tr. opii, 10.0 several doses of 10 to 20 drops.

Salicylic Acid in Articular Rheumatism: Sterlin, *Muenchner med. Wochenschr.*, is enthusiastic on the local application of salicylic acid in articular rheumatism. He uses the formula of Bourget, who first used this remedy locally for this affection: Acid salicylic, ol. terebinth, each 10.0; lanolin, 30.0; ung. petrolii, 50.0. Where maceration of the epidermis occurs after repeated use the turpentine is omitted. At the same time sodium salicylate is given internally; if this is not well borne, or if the symptoms are relieved somewhat, the salve alone is con-

tinued. Proper fixation and an appropriate dressing of bathing is necessary. Slight after-effects, such as buzzing of the ears, dizziness, dyspepsia, etc., cannot always be removed, even where the salve alone is used. In chronic articular rheumatism benefit is received by rubbing the ointment in for 10 minutes.

Saligenin and Aminoforn: Walter, *Muenchner med. Wochenschr.*, highly sanctions these preparations in Gout. The first in acute cases in doses of 1 g. in a glass of water; the latter as a prophylactic, a small dessert spoonful 1 to 2 g., in $\frac{1}{2}$ l. of water, daily in the morning before breakfast. The last should be taken for a year. Untoward after-effects consist of repeated sweating, and from time to time a burning on micturition. Urotropin and Amainoforn are identical. They cost one-third as much as saligenin.

SPENZER.

Among Our Exchanges.

The study of the phenomena of auto-intoxication, which has been so extensively and profitably pursued of late, is beginning to bear fruit in the treatment of other than the febrile and rheumatic diseases. Notably is this true of *dipsomania* and *acute alcoholism*. We have learned to recognize the dipsomaniac as akin to the hysteric, so, at least, DR. WM. LEE HOWARD,¹ of Baltimore, maintains, and the experience of most of us will bear him out in the statement that "There is a physiologic similitude between the mild hysteric attacks of a woman who tries to control her actions, but is not able to do so, and the impulse to drink, which the dipsomaniac is aware of, but generally tries to resist. . . . The protoplasm of the cells of the cortex becomes used up by continued work without the necessary rest needed for recuperation, and while in this vacuolated state they are unable to function their parts; a small amount of alcohol rapidly cuts the higher centres off from the lower, and the result is a disorganized condition of the general nervous system in which the inhibitory power is lost, normal volitional potentialities reduced to mere atoms, and impulsive acts directed by the stimulation of the lower centres. . . . Among the other causes producing this dynamic disturbance of the central nervous system is *auto-intoxication*." Such being the fact, it was but natural that the treatment found most success-

¹ *Medicine*, March, 1898.

ful by practical clinicians should have been first eliminative and then tonic, the correct line of treatment having been sensed by acute clinical observers even before its physiological basis had been fully and accurately determined. But since, as DR. T. D. CROTHERS, of Hartford, Conn.,² very aptly observes, "The primary causes of *delirium tremens* are, in all probability, irritative poisons, rather than nerve exhaustion or profound anæmia. . . . Feeding is secondary in importance to elimination, and no food should be given until free action of all eliminative organs is established." And so he begins his treatment with the withdrawal of all alcoholic stimulants, which do not stimulate but merely prolong the intoxication and increase the danger of a fatal termination; hot baths, as are most convenient, Turkish baths with hot showers and free rubbing where obtainable, or hot tub baths with massage or sponging with hot water, with massage and free catharsis with calomel and salines. The catharsis should be free, irrespective of any apparent weakness or prostration which may follow. Narcotics have no effect to cut short the delirious period, and the various combinations of ammonia, chloral, opium, digitalis, and the coal-tar preparations are dangerous and should not be used. The insomnia and muscular agitation are limited. After free catharsis and bathing, sleep follows within twenty-four or thirty-six hours. When elimination has been fully established, hot and easily assimilable liquid foods are given better at intervals of four or five hours, but no drugs, such as tonics or stimulants, until the subsidence of the delirium and the period of sleep and exhaustion has become fully established; then nitrate of strychnin grs. $\frac{1}{4}$ four times a day, and infusion of cinchona $\mathfrak{z}$ i every four hours, may be profitably given. There are cases, however, where bathing is impracticable. Then diaphoretics are of value, the best of which is ipecac. DR. CRUTHERS maintains that it is not true that delirium is due to the withdrawal of alcohol, but is rather due to narcotic drugs which have checked excretion. In his experience the delirium rarely subsides until after the withdrawal of alcohol and other narcotics, which withdrawal should always be followed by prompt drainage through skin, kidneys and bowels.

Of recipes for the sure expulsion of *tape-worm* there is no end, and all of them are equally unsatisfactory at times; a knowledge of which fact handicaps the conscientious practitioner, for he, being a man of veracity, cannot

² *Med. News*, April 23, 1898.

guarantee a cure as the quack can. DR. SASS,³ however, calls attention to the method of HÖGER, first proposed in 1888, which seems, on the face of it, to possess some decided advantages, as the only dietary restriction is entire abstention from everything acid during treatment, and the treatment involves no detention from business. *Black oxide of copper*, so it is stated, while in no wise inconveniencing the host—provided, of course, he abstain strictly from acids—has the power of gradually impressing it upon the boarder that life is hardly worth living in that locality, and he lets go in from three or four days in a child, to two weeks in the adult. The recipes are as follows: For an adult, R—Cupri oxid. nig., grs. xc; cretæ precipitat., grs. xxx; kaolin, ℥iii; glycerin, ℥iiss; M. Ft. pil. no. cxx. S. 2 or 3 pills four times a day. At the end of two weeks take a full dose of castor oil. For a child, R—Cup. oxid. nig., grs. lxxv; cret. precipitat., grs., xv; magnes. carb., grs. xv; gum. tragacanth ℥iiss glycerin., grs. LXXV; sacch. alb ʒx aquæ q. s. Ft. pastilles no. L. (50) S. Two or three daily. At the end of three or four days the debris of the tape-worm appear in the stools, and the symptoms disappear. The treatment is specially recommended for cases that have proven refractory to other remedies. DR. E. B. GLEASON⁴ has devised an ingenious expanding plug for checking nasal hemorrhages. True, he has used it only for post-operative hemorrhages so far, but it would appear equally applicable to bleeding from any cause. A large piece of cotton, large enough to completely fill the inferior meatus, is wrapped loosely about a probe dipped in a fifteen-volume solution of peroxide of hydrogen, and thrust along the floor of the nose until it touches the pharynx. As the probe is withdrawn it will usually be found necessary to hold the cotton in position for a few moments with the finger-tip, so great is the pressure caused by the increase in the bulk of the blood-clot owing to the liberated gases. If necessary, smaller pieces of absorbent cotton, also saturated in peroxide, can be packed into the anterior naris in front of the first piece. The usual caution obtains about leaving the plug in place at least twenty-four hours, and when removing it to do so very slowly so as not to excite a recurrence.

³ *Medisk Weekblad*. No. 20, '97.

⁴ *Laryngoscope*.

New Books.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONERS' INDEX. A WORK OF REFERENCE FOR MEDICAL PRACTITIONERS. 1898, sixteenth year. New York: E. B. Treat & Co. 740 pages. Price, \$3.00.

We have for so many successive years drawn the attention of our readers to the excellent features of this publication that it seems scarcely necessary to more than mention that this year's volume is on the market. The publishers evidently consult the wants of and follow the suggestions of watchful readers, for each year's issue more carefully chronicles the advances in the various branches of medicine and fulfills the wishes of the practitioner.

THE SURGICAL COMPLICATIONS AND SEQUELS OF TYPHOID FEVER. By William W. Keen, M. D., LL. D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc., etc. Based upon tables of 1,700 cases; compiled by the author and by Dr. Thompson S. Westcott, M. D., Instructor in Diseases of Children, Univ. of Penna., with A CHAPTER ON THE OCULAR COMPLICATIONS OF TYPHOID FEVER, by George E. De Schweinitz, A. M., M. D., Professor of Ophthalmology, Jefferson Medical College, and as an appendix, **THE TONER LECTURE NO. V.** Philadelphia: W. B. Saunders. Galbraith, New England Bldg., Cleveland, Agt. 386 pages. Price, \$3.50 net.

This is an important monograph on a very interesting and practical subject and it receives systematic and thorough handling by the author. In 1876, Dr. Keen delivered the fifth Toner lecture, taking for his subject, "The Surgical Complications and Sequels of Typhoid Fever." The present work is a study of the cases recorded in the literature accumulating since then and necessarily tracing the changes which have occurred in our views of pathology and treatment during this time.

THE DISEASES OF THE STOMACH. By William W. Van Valzah, A. M., M. D., Professor of General Medicine and Diseases of the Digestive System in the New York Polyclinic Medical School, and J. Douglas Nisbet, A. B., M. D., Adjunct Professor of General Medicine and Diseases of the Digestive System in the N. Y. Polyclinic Medical School and Hospital. **ILLUSTRATED.** Philadelphia: W. B. Saunders, 1898. Pages, 674.

Those physicians who have been complaining that the numerous specialists appropriating one organ or

system after another, peering into every orifice, handling each extremity, knocking and listening at the walls of inaccessible parts, and leaving nothing but the region of the stomach as a field of activity for the general practitioner, may find this a very large and desirable field after all. Of course, if they plod along in the old ruts, guessing at "dyspepsia" and prescribing acids or alkalis, pepsin or gentian without any definite idea of the pathological conditions or scientific methods of ascertaining or relieving them, receiving therefor fifty cents a prescription, the practice will not be found very attractive or profitable. But let the doctor get a copy of Van Valzah and Nisbet and study the stomach, and its diseases, as they are understood by those who have studied them, and he will find it not only a very entertaining subject, but that he will be able to do for his patients that for which they will be satisfied to pay him good, living fees. No class of diseases is more common in this country than those of the stomach, which are at least as well entitled as nervousness to be considered "American," and we are glad to see the subject taken up by American authors and so ably presented as in the book before us, which excited these somewhat aside remarks.

A LABORATORY TEXT-BOOK OF PATHOLOGY. FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By Horace J. Whitacre, B. S., M. D., Demonstrator of Pathology in the Medical College of Ohio (University of Cincinnati), with one hundred and twenty-one illustrations. Philadelphia: P. Blakiston, Son & Co., 1897. Pages, 172. Price, \$1.50.

The name of this book as here given is upon the title-page, but its back bears the title "EXERCISES IN PATHOLOGY." This latter more truthfully indicates the purpose and scope of the work, which might have been still more accurately expressed by naming the book *Laboratory Exercises in Pathology*. It is not a complete treatise on pathology, but only takes up the more important pathological lesions such as are usually demonstrated in a laboratory course in our colleges. The illustrations are engraved from photo micrographs,

so that the student may see how his specimen should really appear in the microscope, rather than by an exaggerated or idealized diagrammatic drawing.

BRIEF ESSAYS ON ORTHOPEDIC SURGERY: Including a Consideration of Its Relation to General Surgery, Its Future Demands, and Its Operative as Well as Its Mechanical Aspects, with Remarks on Specialism. By Newton M. Shaffer, M. D., Surgeon in Chief to the New York Orthopedic Dispensary and Hospital; Clinical Professor of Orthopedic Surgery University of New York (Medical Department), etc., etc. New York: D. Appleton & Co., 1898.

This little volume of 81 pages comprises seven essays. The subjects discussed being sufficiently indicated in the sub-title. Necessarily a good deal of reference is made to the history and literature of orthopedics and surgery, which, together with the main discussion, are presented in a very interesting way.

ATLAS OF METHODS OF CLINICAL INVESTIGATION WITH AN EPITOME OF CLINICAL DIAGNOSIS AND OF SPECIAL PATHOLOGY AND TREATMENT OF INTERNAL DISEASES. By Dr. Christfried Jakob, formerly First Assistant in the Medical Clinic at Erlangen. Authorized Translation from the German. Edited by Augustus A. Eshner, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic, Physician to the Philadelphia Hospital, etc. With 182 Colored Illustrations upon 68 plates, and 64 illustrations in the text. Philadelphia: W. B. Saunders, 1898. Galbraith, New England Bldg., Cleveland, agent for Mr. Saunders' publications.

The distinguishing characteristic feature of this work is the series of colored plates. The idea of the author is that a knowledge of clinical conditions may be acquired more readily and be made to impress the mind more accurately and deeply by means of good illustrations than through ordinary text, and this is no doubt true. Ordinarily colored plates such as these would be too high priced to be reached by the rank and file of the profession, but this volume of 259 pages of printed matter, besides beautifully colored plates and their accompanying descriptive text, is sold at three dollars. All the more important clinical conditions and methods of diagnosis are thus graphically presented.

Correspondence.

MAHOBA, N. W. P., India,

May 17, 1898.

Editor Cleveland Medical Gazette :

It is well enough that they had a department for the diseases of children in the school where I studied, for I have had children, children, children to treat. All sorts of heads and eyes and mouths—even to cancrum oris, and indigestions and fevers, etc. We have 106 of our own in the orphanage here, and as they are all an inheritance of the famine many of them yet have very little powers of resistance.

We had a patient from the outside this morning that I feel sure has whooping cough, but I do hope he did not leave many germs. We have had measles and chicken pox since I have been here, and we are just now through with la grippe, and I do not want anything more that is contagious just at present.

I am sending you a photo of famine boys. They are in really good condition, being somewhat emaciated only, but you can see they have the enlarged abdomens that I spoke to you about in my last letter. (See engravings in front part of this issue.)

When I came from the hills last year, where I had been studying the language, we were feeding from three to four hundred famine people every day. It was just at the beginning of September—the close of the rains—and I had a great number of patients then; I think some days as many as fifty or sixty, and I could just as well have had three or four hundred. Of all that were fed there were very few that did not need treatment. I used to go occasionally when they were being fed, and I can see them yet, two long lines of misery. It was so hot I could not work in the sun. I thought sometimes of erecting a temporary shelter where I could see and treat them, but by the middle of the month I had malaria myself and I gave it up.

There is one case especially I shall never forget. An old man, almost dead, had his leg bandaged with a piece of dirty red cloth. When we asked about it he took off the bandage. The place was almost as large as the palm of my hand, including the fingers, and this was full of maggots. I would hardly believe this if I had been told in the United States, but I saw it. He was too weak to sit up at the time, and died two days afterward. We had

several cases where they were in the scalp. Such cases are really common. Then we had one young girl with them in her mouth; the teeth were so loosened that we took them out when removing the worms. I send you a small photo of a woman who had them in her nose.

The majority of our children and those employed about the place had malaria at the close of the rains. I had two days of fever about the middle of September, and it came on again the first of October. In the morning I had a temperature of 99 degrees and in the evening 101 degrees, and for ten days it remained just the same. At the end of that time I was obliged to go to bed. As soon as I could travel I went to another station where I could be under the care of a good physician. He has had twenty years' of practice in India, but he kept me in bed the most of the time until the first week in December. There is a form of malaria here known as "masked." It may be common at home but I had not heard of it, and mine comes under that head. I say comes, for I know that it is still in my system. I have been feeling well since February, but I have such burning in my palms occasionally, and my temperature is always above 99 degrees in the middle of the day.

Enlarged spleens and livers are very common here, and I believe Indian physicians are very successful in treating them. This year I mean to give prevention instead of having to give cure to our own, and then very likely I will have plenty of cases.

I have had two cases of pneumonia this spring. One, a girl of fourteen, made a very nice recovery, and the other, a little baby of four months, that I was unable to save. This baby was brought here by its mother when about an hour old, I presume. The famine mother had started here, and on the way this baby was born—on the ground and under the blue, blue sky of India.

The mother was in a very bad condition and died in a few days. She gave the baby to me, and it was doing so nicely and getting so plump, until la grippe came into the mission and took it away.

There were little heathen babies around that did not get it at all, and I felt almost jealous that mine that was so well taken care of was the one to take it.

I have been most unsuccessful with my treatment of dysentery. To be sure, my cases have nearly all been famine children, but a medicine containing opium does them no good. They have taken so much of it when

they were little that it has absolutely no effect. I have even been unable to relieve pain with it, and when I say "the child has been fed opium," the almost invariable reply is in the affirmative. With dysentery I have been more successful with the native remedies than with any others, but the after results do not seem to me very good.

Now I must not say more.

Very truly yours,

ROSA LEE OXER.

Notes and Comments.

The original articles and the editorials of THE GAZETTE we see referred to or quoted in some of our exchanges every month. We are gratified to see them appreciated by our contemporaries, who are welcome to use in abstract, in extract or in full, anything appearing in our pages, provided always that due credit be given to the original source. Frequently this is not done. Doubtless this is due to oversight; but the effect is the same. For example, *The Atlantic Medical Weekly* lies before us with Dr. Kemper's lines entitled "*Labor Ipse Voluptas*" miscredited; while the *Medical Council* abstracts Dr. Dutton's paper on "Management of Precocious Children," but makes never a mention of the journal from which it was taken.

The Officers of the American Medical Association elected at the Denver meeting are as follows: President, Joseph McDowell Matthwes, of Louisville; first vice-president, W. W. Kean, of Philadelphia; second vice-president, J. M. Graham, of Denver; third vice-president, H. A. West, of Galveston; fourth vice-president, J. E. Minney, of Topeka, Kan.; secretary, William B. Atkinson, of Philadelphia; treasurer, Henry P. Newman, of Chicago; librarian, G. B. Webster, Illinois; board of trustees, Alonzo Garcelon, of Maine; I. N. Love, of St. Louis; H. I. E. Johnson, Washington, D. C.; T. J. Hopple, Tennessee.

Judicial council, S. S. Bailey, of Iowa; D. R. Brower,

of Illinois; T. S. Davis, of Illinois; H. S. Didima, of New York; N. M. Mason, of Washington; T. T. Rogers, of Rhode Island; M. B. Burd, of Missouri; W. S. Jones, of New Jersey.

Dr. Geo. W. Crile has been appointed surgeon with the rank of major in the Volunteer Army. He will go with General Garretson, whose destination so far as one can guess at present appears to be Porto Rico.

Dr. Wm. E. Wirt has been appointed lieutenant in the U. S. Navy, and he has been sent to Portsmouth, N. H., Navy Yard.

The Medical Department of Western Reserve University has recently held its 54th Commencement exercises at Association Hall. The exercises were opened with prayer by Rev. Edw. Bushnell, Treasurer of the College. The annual address was delivered by Rev. E. S. Lewis, pastor of the Franklin Avenue M. E. Church, well known as an eloquent and forcible speaker. His subject was "The Physician of To-day." Remarks to the graduating class were made by the Dean, Dr. H. H. Powell, who gave them good advice and bade them farewell. The degrees were conferred by the President of the University, Rev. Dr. Chas. F. Thwing.

The graduating class numbered thirty-four, as follows: Pearl A. Beebe, William A. Burns, Chester L. Carlisle, Henry Irving Dodaz, Adolph Cudell, Clyde S. Culp, Emory L. Dial, Egbert S. Dickerson, William F. Doolittle, Melville H. Hall, Harrie E. Hart, Emil J. Heinig, Charles E. Held, Corwin T. Hill, Willis S. Hobson, Gideon H. Hoffman, Charles M. Hole, Cyrus Jaster, Laughlin V. Clyde, Mervin J. Little, Ernest H. Lueke, William C. Manchester, Edwin C. McComb, Walter H. Merriam, Gustav H. Mitchell, John W. Norrel, William O. Osborn, William W. Phillips, Otho J. Powell, Edwin G. Rummel, Frederick J. Schmoldt, Edwin H. Seacon, John W. Seids, Walter G. Stern, Robert H. Sunkle, William J. Thomas, William H. Wood, and William J. W. Woolgar.

Diagnostic Medical-Chemical Work, such as examinations of urine, feces, and stomach washings, are now made for the profession by Dr. John G. Spenzer, who has fitted up a laboratory expressly for such work. Many of our readers will be glad to avail themselves of Dr. Spenzer's eminent skill in this department. He has chosen a convenient location at 341½ Prospect Street, and we have no doubt will be called upon by many physicians of Northern Ohio with knotty problems in respect to foods and poisons or suspected poisons.

The Faculty of the Cleveland College of Physicians and Surgeons has received several additions: Dr. N. Weiden-thal has been elected Professor of General Pathology, and Dr. Benj. W. Holliday, Professor of Medical Jurisprudence. Dr. C. J. Aldrich is Lecturer on Clinical Neurology, and Dr. R. G. Schnee Lecturer on Bacteriology and Pathology.

A number of assistants have also been appointed by various chairs in addition to those already in active service. Dr. Edw. S. Lander is Assistant in Diseases of Eye and Ear, Dr. W. E. Lower Assistant in Surgery, and Dr. I. Friedman Assistant in Medicine.

Dr. John G. Spenzer, of Cleveland, was married to Miss Minnie E. Kittelberger, and Chas. T. Grant, Esq., of Akron, to Miss Alnor Kittelberger, at the home of the brides' mother, Cuyahoga Falls, June 15, at 7:30 P. M. Some thirty Cleveland friends of the doctor were among the 300 guests in attendance. Dr. and Mrs. Spenzer will be at home at 253 Amesbury Avenue, after July 15.

Dr. D. K. White has been elected dermatologist to the City Hospital.

Dr. C. J. Aldrich has been elected neurologist to the City Hospital.

Dr. C. B. Parker was re-elected at the annual meeting Chairman of the Faculty of the College of Physicians and Surgeons.

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JULY, 1898.

Original Articles.

THE ACTION OF DRUGS IN CHILDREN.*

J. B. MCGEE, M. D., CLEVELAND, OHIO.

The use of drugs in diseases of children is a subject of more than ordinary interest. Absolute diagnosis as a rule receives more attention than what Wood has aptly termed therapeutic diagnosis, and, while recognizing the value of hygienic and dietetic aids, we cannot wholly discard our drugs, or coincide with the "therapeutic nihilism" which some of our more recent authorities recommend. Practically their use cannot be ignored, and although many ascribe to them quite a minor part in the cure of disease, their effect is certainly appreciable and beneficial when judiciously employed.

While it is doubtless true that in childhood as little medication as possible is desirable, it is also probable that he who is most conversant with drug actions and applications will use them most freely and with most successful results. It is evidently as essential to know what a drug cannot do, as to understand what it can, and, as the range and actions of some of them are quite extensive, the fact that it is placed in a certain class should not lead us to ignore other and perhaps almost equally valu-

*Read before the Ohio State Pediatric Society, at Columbus, May 3, 1898.

able powers it may possess. Classes we know are convenient rather than absolutely accurate, and evidence from a clinical standpoint often complements our pharmacology. It will be convenient then to consider, although perhaps not completely, some of our ordinary drugs, under their usual heads of classification, and summarize facts and statements somewhat scattered. We readily appreciate the fact that differences of opinion must exist where so great a latitude prevails as in therapeutics, and into which the personal equation so largely enters. While therapeutic peculiarities exist in the child and the tendency to recovery in acute disease at least is far greater than in the adult, there are some general rules governing action and administration of drugs equally applicable to both. In children, medication should be as simple and as slight as possible, and small doses frequently repeated will generally yield the best results. Those remedies which are absorbed and eliminated rapidly, as alcohol, nitroglycerine, and the ammoniacal salts, which are rapid in action and fleeting in effect, should be frequently given to maintain their action. These agents should not as a rule be given at long intervals, as the effect of one dose is thus lost before another is administered.

Aconite and belladonna are also absorbed and eliminated quite quickly by the urine; Harley's assertion that belladonna is completely excreted in two hours would indicate the fact, and this is also true of aconite, that it may be given as frequently as this with probable benefit. When absorption is slow, and elimination as well, the effect is persistent, and the interval between doses should be longer. Digitalis is a typical example of this class, and here we should err in giving it every hour or two, as the slow elimination would increase the cumulative tendency, and hence four to six hours' interval with an occasional cessation to allow excretion of excess, would probably ensure the best results. When a rapid action is desired, a form readily soluble and absorbable should be chosen, while the pill or powder should be reserved for those cases in which a slower effect is indicated. The pill form

and powder if at all bulky are objectionable in children, especially if quite young, and as a rule no sparingly soluble preparation of any very powerful or poisonous drug should be given them. While remedies are usually more rapidly absorbed when well diluted, with children it is advisable to administer them in as small a bulk as possible, and orally if practicable. The advantages of the active principles are self-evident; their definite composition and decided effect, the ready solubility of their salts when alkaloidal, and the small dose required render them on the whole one of the most desirable forms for medication. While children vary in susceptibility, they ordinarily tolerate most remedies remarkably well, and show special intolerance to but few. The simpler the prescription the better, a single active agent if possible. Such drugs as are rather insoluble, as salol and sulphonal, should not be given in pill or compressed tablet form, as they may pass through the intestinal canal intact. As a vehicle, glycerin is sometimes better than syrup, whose tendency to ferment, especially in the summer months, is a decided disadvantage. As regards the dose, there is, as in adults, an absence of absolute accuracy, and although the general rule is that a smaller relative dose is required, we know that children of eight or ten years will safely take and bear well larger doses than we generally give, and of some drugs that which represents the average adult dose. Dr. Carr formulates the general rule that with the exception of opium, children require of nearly all the most important drugs, "larger doses than are given by the rules we generally follow for children." So it is very probable that, except opium and perhaps cocaine, we can give to them larger doses than we usually do with benefit at the time and no serious after effect. The very active eliminative power of the kidneys in childhood renders the use of the remedies safer, and obviates to a great extent any cumulative tendency. Another fact not perhaps so generally recognized as it deserves, is the advantage which the salts of sodium possess over those of potassium, generally, and especially in

the case of the iodides and bromides. The base is here simply the carrier of the active agent, the iodide or bromide, as the case may be, and the sodic salt is more soluble, less irritating, and can be given in cases in which the potassium salt disagrees. Sodium is the natural salt of the blood, and intestinal secretions, and hence is less likely to produce disturbance, and as it is less toxic does not exert the depressing effect on the circulatory system which follows the use of the potassic salt when long continued. It is equally efficient, is less disagreeable, and especially with children, or when to be used for a considerable time, is infinitely preferable. In renal cases, where a diuretic is desired, perhaps the potassium salts are better, but exclusive of these the combinations with sodium usually yield better results. In giving an iodide, it is well to remember that it is absorbed and eliminated very quickly; when taken orally it appears in the urine in about fifteen minutes, and a single dose is almost entirely eliminated in 24 hours. So when given for some time, it is probably best to give it frequently till the point of saturation is reached, and then continue in small doses to maintain the action. The risk of iodism seems to be less with the sodic salt, and should it appear, is said to be less decided, although children seldom show this evidence of iodine action, as they bear the drug extremely well. The hydriodic acid syrup is a very pleasant and active form, palatable, prompt and efficient. We are, of course, familiar with the fact that children are especially susceptible to the toxic action of opium, and its derivatives, with them collapse occurs very quickly, and convulsions are quite common, while in the adult, except those of the lower races, they are exceptional, and the reason has been assumed to be, that owing to the greater development of the spinal system over the cerebral in the child, the spinal symptoms are most evident. If used in any form, it should be cautiously given and closely watched, and, with care, it is a valuable remedy even among the young. It has been stated that the extreme susceptibility disappears or at least diminishes after the first three months of life,

and Holt believes that it is as valuable during the first five years as at any other period. With the exception of the camphorated tincture, one drop for each year is considered a safe dose of the liquid preparations, and of the derivatives, codeine is probably preferable to morphine. It would appear, too, that as in adults, opium is best borne in peritonitis, as Garrod states, that in this disease, he has given one-fourth of a grain of morphine every three or four hours to a child eight years of age, with benefit.

Dovers powders, of which the dose is about one grain for each year, is often recommended as a suitable anodyne for children, but it is probably a good rule to follow that no solid form of opium should be given in childhood; and in this case there is the risk not only from the amount of opium called for officially in the dose prescribed, but also from any excess existing owing to its unequal distribution in the powder, so that the representative dose may contain more of the drug than is presumably present. Alarming results have been reported from doses supposed to be safe, and, generally speaking, a liquid preparation is far preferable.

Of the other somnifacients, chloral is extremely well borne even in infancy and the depressing effect on the heart is seldom shown. It is rarely necessary to employ hypnotics in childhood, baths and accessory means being usually sufficient, but in acute disease they are sometimes needed, and of these chloral hydrate is comparatively safe, and if its cardiac effects are feared, a heart stimulant at the same time will counteract this without interfering with its sedative or somnifacient action. When given orally it should be well diluted to avoid its sharp taste and irritant effects, and hence some advise its rectal administration, especially in very young children. One grain for each year is a safe general dose, although an infant of two months has taken two grains, and one of twelve months, five grains three times a day, with good results. Convulsions require the largest doses, and spasmodic asthma, which is occasionally met, is best controlled by doses of three to five grains. As an hypnotic, it acts best

in the nervous and restless cases, while in the insomnia of cerebral congestion the bromides are to be preferred. These seldom disagree, especially the bromide of sodium, which I have personally used for years and consider greatly superior to the potassium salt, with less depressing effects; it is less stimulating than the bromide of ammonium, which is very well borne, especially in epilepsy; the bromide of strontium is also a good form to employ, all the strontium salts seeming to possess stomachic properties which render them of value in gastric disorders, and to this rule the bromide is no exception.

The bromides, while rapidly absorbed, are very slowly eliminated, as their presence has been detected in the urine as late as one month after ceasing the use of the drug. So when given continuously, it would appear best, after the effect on the system is manifest, to maintain this by one or two doses daily, which will probably prove sufficient because of the slow excretion of the remedy. Sulphonal is considered a safe hypnotic, and is best given dissolved in hot water or milk. Seven grains is said to be a sufficient and safe dose for a child ten or twelve years of age. Its hypnotic power is about three-fourths that of an equal amount of chloral, and its action is rather slow. Sulphonal is eliminated unchanged by the kidney, and when given for some time may produce renal irritation, and on the appearance of a red tint in the urine, its use should be suspended.

Trional resembles sulphonal to some extent, and is said to be an excellent somnifacient in children. It does not irritate the kidneys, and is very efficient when the insomnia is nervous in its origin. The dose at one year is from two to five grains and this is gradually increased with each year, and twenty grains have been safely given to a child of ten or twelve years of age. This really represents an average adult dose, but it shows the tolerance and comparative safety of the remedy. It should be given shortly before retiring, as its effect is quite rapid, although the sleep is not so prolonged as that produced by sulphonal, which it equals in power, with the advantage

of prompter action and fewer unpleasant after-effects. Hyoscyamus is a mild hypnotic and sedative, and has some reputation as a substitute for opium in the young. I have found small doses of hyoscyamine to act well in febrile delirium, and probably hyoscine would be equally or more efficient in an appropriate dose.

Belladonna is exceptionally well tolerated in childhood, and the characteristic scarlet eruption is generally the first, and often the only disagreeable evidence of its action. The fact is rather remarkable, as belladonna is usually not well borne by adults, while children, as in enuresis and pertussis, will safely take what we regard as extremely large doses. The general rule for the tincture is two drops for each year of age, but this can be greatly and safely exceeded, as sixty drops daily have been given to a child two or three years old, and one of ten has safely taken an amount equivalent to one fluid dram of our official tincture at a single dose. No other vasomotor stimulant equals atropine in the rapidity of its action, and in the collapse which occurs in pneumonia in childhood it is probably one of the best agents we possess; strychnine equals or perhaps exceeds it in power, but atropine excels in promptness. Atropin, too, is an almost perfect physiological antagonist to pilocarpin, and when under the use of this drug excessive sweating or salivation is present or collapse is feared, it is well to remember that atropine will rapidly relieve these effects.

Among the drugs comprised in the class of cardiac stimulants, alcohol, while rather perhaps an emergency than a routine remedy, is one of those most commonly employed, and children generally seem quite tolerant of it, and in some diseases, as diphtheria and septic conditions, remarkably so. It seldom disagrees when indicated, and children respond rapidly to its action, and while decided differences of opinion exist as to its value, it is certainly, carefully used, one of our most efficient remedies. It is a food as well as a stimulant, an antiseptic, and according to Binz an antipyretic; small doses, frequently given, in as concentrated a form as can easily be

taken, will generally yield the best results. In some cases of great weakness, and especially in pneumonia, nitroglycerin in minute doses acts rapidly and well; its effects resemble those of alcohol to a certain extent, stimulating the heart and dilating the capillaries, but is more rapid and powerful.

Of the true cardiac tonics, digitalis and its derivatives doubtless retain the first place with children as with adults, although opinions differ as to its relative value as far as strophanthus is concerned. Dr. Hare affirms that before puberty strophanthus is on the whole the better drug to employ, and digitalis after that age. Dr. Jacobi, however, believes that digitalis is even better borne in children than in adults, while Dr. Wilcox states that he is thoroughly in accord with Dr. Hare as to the great value of strophanthus in childhood. Personally, I have used it quite freely with children, and have always found it well borne and beneficial when indicated; its promptness is one advantage over digitalis, which we know is quite slow in producing its results, and its decided diuretic power renders a cumulative effect quite rare, while its lack of contractile power over the arterioles is in some cases an advantage; on the other hand, however, its effect is rather evanescent, and it is said to lack the special nutrient power of digitalis on the heart. When a good preparation of the entire leaf is used, digitalis is probably fully as valuable in, and as well tolerated by children as adults, though Hare thinks it will less generally prove satisfactory; gastro-intestinal irritation is liable to follow its use and strophanthus is at least a very efficient substitute, the indications being practically the same as those existing in adults; of this drug, one drop of the tincture is a fair dose even for quite young children, and I have given with benefit four and five drops three times daily to a boy of twelve suffering with cardiac dropsy.

Strophanthus differs from digitalis in the fact that its active principle strophanthin represents practically the entire activity of the plant which yields it, while digitalis is very complex in composition, and no single principle

or glucoside embodies its complete medicinal value, although digitalin most nearly does so; so that to obtain the characteristic effects of digitalis it is best to employ a préparation of the leaf itself, rather than any one of the four medicinally active principles which it contains. The objection to digitalis that it contracts the arterioles and so increases the work of the heart is readily remedied by combining with it minute doses of nitroglycerine, which children bear quite well, and while we are apt to consider this drug a cardiac stimulant alone, its power of peripheral dilatation in lessening the heart's work is probably a still stronger factor in the benefit it confers.

Caffein, while effective as a cardiac tonic and diuretic in adults, stimulates the brain as well as heart, and should be sparingly used with children, especially if cerebral complications exist. Cocain, another effective cardiac stimulant after puberty, is not very well tolerated by the young, especially the weak or anaemic. Strychnin, an almost ideal heart tonic, is better borne and in larger doses by children than we might suppose. In the toxic paralyzes and cardiac asthenia following the acute infectious diseases, it is almost universally used, and is rarely contra-indicated, except when the reflex excitability of the nervous system is quite decided. Of the cardiac depressants, veratrum viride is an efficient sedative, but I believe aconite is generally preferred in the acute febrile affections of childhood, in which it has relatively greater power than in similar conditions in adults. It does not relax the vascular system as veratrum does, and very rarely produces vomiting, which frequently follows the use of that drug; veratrum, however, is a safer drug to employ, its tendency to produce vomiting rendering its toxic action less to be feared than that of aconite. The earlier aconite is used in the febrile condition the better, the response to its action, and as its effects are rather transitory it should be given frequently, and the best results appear to follow small doses. In fact, Murrell makes the rather dogmatic assertion that "no physician unacquainted with the use of aconite in this manner, i. e.,

in small and frequent doses, should be entrusted with the care of the lives of women and children." The tincture is perhaps most generally employed, although the aconitin of commerce, which is really not a single alkaloid but of a rather complex character, may be used in infinitely small dosage. Of the alteratives, children, we know, show a peculiar tolerance of mercury in nearly all its forms. It seldom salivates or shows other evidences of toxic action, although Bartholow affirms that the characteristic colored stools it produces are the result of serious changes in the glands of the lower ileum. Ganod asserts that "the idea that calomel causes injury to the teeth can be absolutely contradicted," and ascribes such when present rather to errors in feeding, or the condition requiring the use of the drug. The well-known value of the bichloride in diphtheria has been assumed by Hare to be due to "stimulating cellular activity, so increasing phagocytosis, or the production of antitoxin." Another drug quite frequently employed in this disease, as well as generally with children, is the chlorate of potassium. If used at all, it should be very carefully, as it is toxic in effect, and extremely irritating to the kidneys. It has been stated that, excluding the cyanide, it is the most toxic of the potash salts, and as regards diphtheria its use should be discarded; several of our most eminent therapeutists have expressed the opinion that when here given the patient has frequently died from the drug rather than the disease. We know that in diphtheria the toxins in the blood are eliminated by the kidneys, and this drug irritates the secretory cells, increasing their work, and interferes with the excretion of the toxic agents. To the tincture of iron, with which it is usually combined, is doubtless due the beneficial effect sometimes obtained, and we know that it is absorbed and eliminated unchanged, and that its curative action on inflamed mucous membranes is entirely local in character.

There is little doubt that arsenic is one of the remedies which are better borne by the young than by adults. It is eliminated very slowly and hence two or three doses

daily are probably better than when given more frequently. Its range of use is quite extensive, and we know it should be absolutely avoided in the acute form of skin diseases, while almost universally beneficial in those of a chronic character. Fowler's solution is the form generally preferred, and to avoid its irritant action it should be given well diluted, after meals, and as it tends to accumulate, as in the liver, its use should be occasionally suspended to favor elimination. While we usually regard arsenic as comparatively safe in childhood, and in chorea such large doses as ten or even fifteen minims are taken with benefit, and rarely disagree, it is well to remember that Rotch asserts that he has seen its use in this disease not unfrequently followed by the production of multiple neuritis.

As regards antipyretics, it is stated that children do not endure direct application of cold so well as adults, but Holt believes that it is the best antipyretic we possess for infants at least. The greater rapidity of circulatory changes, and the ready response of the nervous system, indicate that pyrexia in childhood is more readily produced, and is probably of less relative significance. We know the abstraction of heat does not influence the course of a fever, but lessens its severity, and possibly its complications; and as we also recognize moderate fever as probably conservative in character, and ascribe the degenerative changes to a toxic rather than a febrile source, we employ antipyretics less than formerly, and simply for the relief of symptoms; their use is limited in range, and the cold bath is at present preferred to the general exclusion of the antipyretic drugs, which are believed to be less certain and less safe. The objections to the coal tar antipyretics are the depression exerted on the circulation and respiration, as well as the blood changes produced, and the extreme diaphoresis and lessened diuresis under their use.

Of them we should prefer the one which reduces the fever gradually, and this is the action of phenacetine, so that collapse rarely follows its use, and it probably interferes as little as any other similar agent with the organ-

ism in resisting the infective influence. It is the member of this group which I personally prefer and in my opinion is as safe as any drug can be that will produce so decided a therapeutic effect. While its lack of solubility is an objection, the dose required gives rather a small powder, and I rarely employ any other antipyretic, except cold sponging, in children, and have never seen depressing effects follow its use. Antipyrin, while well borne generally, produces rather rapid defervescence, and collapse is more liable to be induced. Although it is rapidly absorbed, a long time is required for its complete elimination, and if given quite frequently a cumulative tendency may follow. Acetanilid or antifebrin, however, while quickly absorbed, are far more rapidly eliminated than antipyrin, and hence may be safely given at shorter intervals than that drug, although the depressing effects are said to be greater. Quinine is rarely used for its antipyretic action, unless in malaria, but is a drug which is remarkably well tolerated by the young. H. C. Wood's use of it in chorea, in which he has given exceptionally large doses with benefit, and no production of the characteristic cinchonism, shows that it is borne unusually well. In pertussis, I have used it almost as a routine remedy, as recommended by Binz, and found it to rarely disagree. The various preparations of licorice, of Yerba Santa, or the syrup of chocolate, are the best vehicles for its administration.

Antiseptics play quite an important part in the treatment of gastro-intestinal disease, and in controlling or averting the auto-infection sequential to an intestinal cause. Of these, carbolic acid should be very carefully employed, as it is extremely poisonous to children even in minute doses, and as toxic symptoms readily follow its local application, it should be cautiously used even externally and then only in very dilute solution. The same objection does not apply to the use of the zinc and sodium sulpho-carbolates as intestinal antiseptics; the union of the two acids appears to lessen the toxicity, the gradual decomposition of the salt evolving the carbolic acid

so gradually that serious symptoms seldom ensue. Salol, which maintains its integrity until decomposed by the intestinal secretions, is one of the best of this class, but the large amount of carbolic acid it contains should be remembered, and although moderate doses generally produce no ill effects, its use when nephritis exists would probably be contra-indicated. While the salicylates in a general way are quite well borne, they are apt, except in small doses, to cause gastric disturbance. Creosote, owing to its disagreeable odor and irritant action, is best given to children in the form of its derivatives, and of these the carbonate and benzoate are safe and unirritating. As regards the iron compounds, many believe that the organic preparations alone possess therapeutic value, and especially with children. Of the various peptonates and albuminates, ferratin is one of the best, is well borne, easily taken, and is said to be practically the form in which iron is presented to the organism in the food. Personally, however, I regard the tincture of the chloride as still one of our most efficient chalybeates, notwithstanding its rather astringent character, and many recent and palatable rivals for favor.

Serum therapy has practically proved its value, and its marvelous results in diphtheria show that children bear even the most concentrated solutions well, and as regards tuberculin, Dr. J. T. Whittaker, after an extensive experience, believes that children bear it even better than adults, and react to it in a most favorable manner.

THE PREVENTION AND TREATMENT OF HERNIA IN CHILDREN.*

BY CHARLES S. HAMILTON, M. D., COLUMBUS,

Professor of the Principles of Surgery, Starling Medical College.

The subject of hernia in children is becoming more interesting to the surgeon in proportion as the safety and success of the radical operation for the cure of hernia is.

* Read before the Ohio State Pediatric Society, at Columbus, May 3, 1898.

established. The time is within the memory of all of us when radical operations in children were almost unknown. The experience of a few brilliant surgeons—notably that of Coley in the United States—has opened a new field and created other indications for treatment. I think, therefore, that the President of the Society has not unwisely decided that some of our time to-day should be given to the discussion of this topic. At the same time I must say that personally I cannot lay claim to a large experience in the operative treatment of hernia in childhood.

So far as the prevention of hernia in the very young is concerned, we are confronted at the outset with the fact that our efficiency in this line is of necessity quite limited. It is true that 35 per cent. of the sufferers from rupture show a history of heredity—an inborn tendency which we may oppose, but which we cannot eradicate. A supposed predisposing cause is abnormal length of the mesentery. This condition could hardly be detected except at the time of an operation, nor could it be radically corrected when recognized. The length of the mesentery is proportionately almost twice as great in children as in adults. All of us appreciate the effect of those diseases which cause the infant to strain violently and repeatedly, such as constipation, phimosis, stone in the bladder, intestinal disorders, with consequent diarrhea, and whooping cough.

We know, too, that any wasting disease which produces great muscular weakness and loss of the fat which, in greater or less quantity, fills the various hernial orifices and canals, is an important cause of hernia. All of these conditions we seek to relieve on other grounds, and they require no further mention here.

My attention has been called by our President to a point in the prevention of hernia which deserves attention, viz.: with reference to faulty dressing of the infant. The abdominal band is universally used, and it seems to me properly. Its tension, however, should be carefully regulated. If wrapped too tightly about the infant, it

prevents diffusion of the increased intra-abdominal pressure which accompanies straining efforts on the part of the child. While the binder doubtless assists in the prevention of umbilical hernia, it must, when too tight, greatly increase the pressure in the lower abdominal zone, thus favoring the occurrence of inguinal hernia. When we consider that umbilical hernia in children is almost self-curative, and that inguinal hernias are often relieved only after the greatest perseverance and patience, if at all, the impropriety of constriction of any sort about the abdomen of a child is at once apparent. Therefore, it seems to me that the physician should consider it one of his ordinary duties in attendance upon infants to see that the clothing of the child is intelligently adapted to its needs and weaknesses in this respect.

The hernias of childhood may be included under three heads,—the inguinal, the umbilical and the femoral; the latter being, of course, rare. Congenital umbilical hernia, that condition in which a considerable portion of the abdominal viscera is found outside the abdomen at birth, covered by the expanded umbilical cord, is, properly speaking, not hernia at all, and need not be considered. The inguinal hernia of childhood is generally indirect. Very often the funicular process of peritoneum, which was originally continuous with the peritoneum above and with the tunica vaginalis testis below, fails to close after birth, or closes only at a point just above the testicle. When a hernia occurs in the first case it is "congenital," the viscus passing down into the tunica vaginalis and lying in immediate contact with the testicle. In the second instance the hernia occurs into the funicular process of peritoneum and cannot enter the tunica vaginalis. These two varieties are quite common in children, though inguinal hernia precisely like that of the adult may be encountered, with sac quite independent of the funicular process or the tunica vaginalis.

Nearly half of the ruptures in children are noted by the end of the first year after birth, and twenty-five per cent. of the remainder appear by the end of the second

year. To quote Coley's able monograph: "At the Hospital for Ruptured and Crippled, New York, during the six years from October 1, 1890, to October 1, 1896, there were treated 26,238 cases of hernia. Of these, 6,586, one fourth of the entire number, occurred in children under the age of 14 years. Of 22,362 inguinal herniæ, 5,554 occurred in children under the age of 14; almost exactly one-fourth. Of 21,000 cases of hernia observed at the London Truss Society, 3,433 were in infants under the age of 1 year." These operations for strangulation in inguinal hernia, only 13 were in children, and particularly in infancy.

In dealing with umbilical hernia, it is usually necessary to resort to some very simple device. A flat pad, such as may be made by covering a large button or a coin with a chamois leather, should be strapped over the protrusion with an unirritating adhesive plaster band which does not encircle the abdomen completely. This dressing should be changed as often as the ordinary rules of cleanliness may dictate. Such treatment carried out for from six months to a year will ordinarily result in a cure.

The diagnosis of inguinal hernia is not always a simple matter. Hydrocele may co-exist, or existing alone may give rise to confusion. It should be remembered that hernia in an infant may be quite as translucent as hydrocele. Therefore, in case of doubt I should prefer incision with antiseptic precautions rather than blind puncture with an exploring needle, in order to clear up the diagnosis.

Some English surgeons advocate the use of a skein of yarn bound about the child in such a manner as to form a truss and perineal strap. It is simple and inexpensive and makes a very fair truss for infants. It must be acknowledged that the use of an ordinary spring truss in the first few years of life is not always easy, and occasionally impossible. It requires some skill on the part of the physician, and a great deal of care and intelligence on the part of the mother. Fortunately we are aided very often by the potent "*vis medicatrix naturæ*" of the

healthy infant, or our percentage of cures would not be so large as it is. The truss must be so moulded as to fit the body of the child accurately, making even pressure without bearing too heavily over the bony prominences. It should be worn day and night, a strenuous effort being made never to allow the rupture to protrude. The skin must be watched to prevent chafing from the pad and the mother should make frequent examinations to see that the rupture has not escaped under the pad.

No very definite rule may be laid down as to just how long the truss shall be worn.

It is not uncommon for an inguinal hernia in a child to remain up for several months, even when no truss has been applied. It would seem to be wise, therefore, to insist upon the use of the truss for at least a year — and better two years, from the date when the protrusion was last noticed. In a successful case the external ring will become narrower and no impulse will be noted when the child strains or coughs.

Femoral hernia is naturally rare in children because the configuration of the infantile pelvis does not favor its development. It cannot be controlled by a truss and demands radical operation, which is neither difficult nor especially dangerous and gives good results, according to Coley.

It should be borne in mind that a truss may be applied which, while it prevents the descent of the hernia, makes such strong pressure over the inguinal canal that it produces atrophy of muscle and aponeurosis, with dilatation of the external ring, rather than that closure of the canal by adhesion which we seek to favor. A successful truss should accomplish the retention of the viscus within the abdomen with very moderate pressure of the pad. Otherwise a cure may not be expected and resort to operative treatment would be indicated.

Strangulated hernia is very rare in infancy. Out of 1,900 operations for strangulation in inguinal hernia, only 13 were in children. Five such operations were performed at the Hospital for Ruptured and Crippled, be-

tween 1891 and 1895, on children under two years of age. The mortality is about 15 per cent. in large series of cases.

While the vast majority of inguinal hernias in children may be cured by the proper use of the truss, there remain cases which cannot be thus relieved. Coley maintains, after careful investigation of statistics, that about 30 per cent. of our cases of inguinal hernia treated in childhood would still have hernias in adult life, if they survived. I have not been able to find anywhere a statement of how many of the cases of hernia, cured by the truss in childhood, have a relapse in adult life. This is a very important factor in estimating the necessity for operation. From my personal experience I doubt whether many of the cases thus cured have hernia in the same region later, though the question is not an easy one to settle, many adults being quite unable to say whether they had hernia in the same locality in childhood.

Bearing in mind, however, that 30 per cent. of the cases of inguinal hernia in infants are not cured by the truss, we have then a class of cases in which the radical operation is justifiable and proper. It is pretty well established that such operation should not be done before the fourth year. Before that time the gravity of the operation would be considerably greater, and probably the use of the truss could not be expected to produce a cure in less time. If, then, in a strong child more than four years of age (1) the external ring is exceptionally large and its pillars weak; (2) if the difficulties in the use of the truss are insurmountable, on account of the ignorance or negligence of the parents, because the child cannot tolerate a truss; (3) if the truss will not keep the hernia up; (4) if the hernia is irreducible, which is uncommon in children; (5) if the hernia becomes strangulated and taxis will not reduce it, the radical operation may be performed, with good prospect so far as both the life of the child and cure of the disease is concerned.

Of the many operations that have been practiced for the radical cure of inguinal hernia, none has given the high percentage of apparently permanent cures that the

Bassini operation offers. Sufficient time has elapsed to subject the method to thorough criticism and its position is established to the exclusion of almost all other radical operations. Its performance is, if there be any difference, simpler in the child than in the adult, for the reason that the natural anatomical appearance of the parts involved has not been destroyed by the prolonged use of a truss. In order that it should be successful in either adult or the child, several points are essential:

- (1) Reasonable health of the subject.
- (2) Scrupulous cleanliness in operating.
- (3) An aseptic, absorbable suture material for the buried suture.
- (4) Primary union without drainage, and the recumbent position until healing of the sutured structures is sound and strong.

The steps of the operation in children are as follows:

(1) Incision over, and somewhat longer than the inguinal canal, exposing the external ring and the aponeurosis of the external oblique. Careful hemostasis.

(2) Division of the aponeurosis overlying the inguinal canal exactly in the line of its fibres, and slightly beyond the region of the internal ring. The flaps of aponeurosis thus formed are reflected, the lower one until the under border of Poupart's ligament is exposed, the upper for one-half or three-fourths inch toward the umbilicus.

(3) Exposure and isolation of the spermatic cord. The sac will be found in close relation with the cord, and when identified, can be separated from the cord largely by the finger and blunt dissection. Any fibres of the internal oblique or transversalis which overlies the cord and sac must be retracted and not cut. No muscle fibres should be cut at any stage of the operation.

(4) The sac, having been separated flush with the internal ring, is opened in order to be sure that no viscus is adherent within it and then tied off as high as possible. For the ligation of sac, and the subsequent suturing of muscular and aponeurotic tissue, Coley considers catgut

sufficiently strong in children. In adults, chromicized catgut or kangaroo tendon is better.

(5) The cord being held up out of the wound, the internal oblique, transversalis and conjoined tendon on the upper border of the wound, are sutured to the under surface of Poupart's ligament below. Externally the approximation may be made as snug as is possible without compressing the cord in the region of the internal abdominal ring. This step is most important, as by it a new and stronger posterior wall is created for the inguinal canal. In some instances it may be wise to insert one suture external to the internal ring.

(6) The aponeurosis is sutured carefully over the cord, one or two sutures being used to narrow the external ring also if necessary. Here, again, due regard must be paid to the possibility of constricting the cord and thereby destroying the testicle.

(7) Closure of skin wound, with firm dressing, specially designed to prevent soiling with urine or feces. A plaster dressing over all will secure requisite immobility of thigh and abdomen.

Such is the operation as practiced by Coley and his success, it seems to me, thoroughly justifies the method.

CONCLUSION.

(1) Ordinary inguinal or umbilical hernia may be treated with trusses from early infancy.

(2) The great majority of such hernias is relieved by mechanical treatment.

(3) There remains, however, a certain proportion of cases of inguinal hernia in which, from various causes, a cure cannot be accomplished by mechanical treatment.

(4) Such cases are suitable for cure by radical operation, which should not be performed earlier than the fourth year.

(5) In case of strangulation, operation for radical cure should be performed with that for the relief of strangulation, exactly as in adults, no matter what the age of the child may be.

I take great pleasure in showing the Society a few of the ordinary trusses for infants, in use at the Hospital for Ruptured and Crippled in New York. I am indebted to Dr. W. T. Bull for the opportunity of presenting them, he having very kindly selected them for me.

142 East Long street.

DISCUSSION.

DR. KELLEY: One of the surgeons at the Hospital for Sick Children, Great Ormond street, London, Mr. Arbuthnot Lane, had some ideas upon hernia to which I had never before had my attention so forcibly directed. The outdoor clinic of this hospital has about one thousand patients a week. During Mr. Lane's service there, I was astonished at the vigorous way in which he "pitched into" the women who brought their children there. No matter why the child was brought, he would say, "that is due to bad feeding; if this child dies, it is all your fault. Don't you know better than to feed a child such stuff?" He had some rubber stamps he used, which said, "Never feed your child more than three times a day." When a case of hydrocele came in, I was more than startled to hear him say, "That is bad feeding; it is all your fault." Then came a case of hernia, and he said, "Bad feeding. What and how do you feed the child?" We were inclined to smile, and he began to explain. He said there is some sense in this. "You see, this bad feeding has brought about a rickety condition, not only weak bones, but flabby muscles and aponeuroses throughout. There is tympanites and interference with the circulation of the blood in the intestines. Serum is poured out and we have a hydrocele, or distension opens the way for a hernia." I saw that bad feeding might have something to do with hernia and hydrocele. I believe the essayist might add as a cause of hernia, "bad feeding." It seems a little remote, but it does work around that way in some cases. In regard to that button for umbilical hernia, it seems to me the button is too small. It does well in a hospital, where it can be watched, but in private practice or

dispensary practice it is too small and will get out of place. One needs a larger piece to be effective over an umbilical hernia; a flat disc, perhaps two or three inches across, strapped on. It gets out of place when bandaged on. If left to the care of the mother, it will slip about and not retain the hernia. The disc should be covered with something that does not absorb moisture and will not chafe. I think it better to strap on with adhesive plaster, leaving the straps unfastened an inch or two each side of the hernia. If for any cause the skin becomes chafed, it can be cleansed, a piece of cotton slipped under and a little powder, and the hernia will not be allowed to get out from the time the truss is put on. The truss sold in the store, with the projection in the center, is worse than useless. I do not see why they make them that way. The projecting piece thrust into the opening might keep the hernia open if it does anything at all. I find them unsatisfactory. In regard to confusing hydrocele with hernia: the cases where hernia is translucent are extremely rare; only when it contains nothing but gas. Fecal matter even if thin will not give the translucency of hydrocele. About these trusses here: they are cheap and good. I see they have no perineal straps. The truss that has to have a perineal strap for inguinal hernia does not fit. You can usually get them to stay in position without any strap. The skein truss which the Doctor mentioned is only useful in infants, not for those who can walk, but for infants in arms. That should be emphasized or some one will be disappointed. It does not retain the hernia in a child that walks. For an infant, it does well for awhile. I have been in the habit of using soft rubber tubing. Cut a button hole in it and button it on just the way that a strap is buttoned on and you have something better than a strap. It does not get hard nor hurt nor shrink like a strap.

DR. LAWRENCE: This paper seems to be of more than ordinarily practical interest, because of its extreme conservativeness. There are no points in the paper to which I cannot most heartily agree. There are some I

would emphasize, some to which I would like to direct attention. In a very large number of cases that are curable by a truss, the probabilities are we have a congenital form in which there is not a true hernial sac. In a great number in which we have a true hernial sac, the use of the truss may be attended by some danger; it may cause inflammations and adhesions of the hernial sac and of the hernia itself. Another thing that should be borne in mind in treating hernia of any form, the smaller the hernial opening, the greater is the angle of flexion and the greater the danger of strangulation. The hernia which is small, either in protrusion or in the hernial opening, should by no means be considered as of less, but of greater danger. The less the amount of obstruction, the less the oedema. In operation, it seems that method which restores the obliquity is preferred. That method which closes first the perineum and the transversalis fascia and then the outer portion with one or two layers of sutures, is preferable. You in this way restore the direct obliquity of the canal.

In reference to trusses there is one point to note, the truss which is fitted and sustained by reaching over the crest of the ilium is as a rule never so comfortable, but it brings pressure upon the opening in the more direct line. Another thing: In a great many of our trusses the body is made almost conical so it presses in and is calculated to dilate the opening, rather increasing the danger, instead of benefiting. The body may be cup-shaped, bringing the edges of the opening together. This is more in accordance with what should be done.

DR. WARNER: The speaker has surely covered all the points most thoroughly and well, and yet there is one thing further which might be emphasized to advantage, namely, the importance of the constant reduction of the rupture. I think many times we fail in curing, because we do not emphasize and impress upon the parent the importance of never letting the rupture come down. I know I have encountered such failures. I am satisfied if it occurs too frequently, you are not going to get so

firm adhesions nor so prompt results as if the rupture were kept up constantly. I wish to emphasize to the parents the necessity of keeping the rupture up all the time. Of course physicians recognize the necessity.

It is believed that a truss without the perineal band has its place of usefulness, but we should be able to do without it in many instances. I do not believe there is anything in this matter of a cure not being as effective where one does not operate as where he does operate. The speaker says there is no proof to the contrary, but I believe the burden of the proof lies in that direction. It would seem to be reasoning from cause to effect. The reduction would be enough to cause adhesions that would last through life. Any proof to the contrary I do not believe exists.

DR. BELT: I do not believe it is necessary for people from the country to get into discussions like this. But I have been surprised how many congenital hernias get well without tampering with them. If I find a congenital hernia, I make it a special point to teach the mother not to let the child's bowels become constipated and to look after the prepuce so that we will not have trouble from that source. I train the mother to see that the rupture is always up, pinning the clothing very tightly and snugly. I am surprised how quickly they disappear. If the mother is a person of intelligence, you will find that she becomes quite an adept in seeing to the rupture. The baby should be kept horizontal and handled with care.

DR. KELLEY: I did not intend to say a perineal strap should never be used, but seldom be used if the truss fits well. That is where the rubber tube will be found most useful if any perineal band must be used.

In regard to adhesions, they can be avoided by not having the spring of the truss too strong. You will be surprised to find how little pressure will retain the hernia, if pressure is in the right direction.

I agree with Dr. Belt in regard to the frequency with which hernias get well with very little radical attention. But they cannot all be trusted to nature and the nurse,

and a few must be dealt with radically. What Dr. Lawrence calls extreme conservativeness I think is not well applied to this essay. Dr. Hamilton has taken very moderate grounds, and has stated the subject very fairly.

DR. HAMILTON, closing: I have found the discussion following the reading of my paper exceedingly profitable to myself. I have learned a great deal from it. Dr. Kelley has spoken of the use of the knob on the hernia. I do not think it is necessary, but I do not think it does the harm he describes. I doubt if a man would succeed who would start out to bore with that. I do not believe any knob you will find will enlarge the aperture of the hernia. I doubt if the knob is necessary, and it might, in some instances, do harm. Dr. Belt has spoken of the tendency to cure. There is certainly little doubt about that. I believe we find many mothers whom we could not educate; even Dr. Belt could not. They have no sense. Since considering the subject of hernia in infants, I have come to believe that physicians have given over the fitting of trusses to those who deal in the instruments. I have made some inquiries here in Columbus. At least one thousand trusses are fitted annually by people in the instrument stores, and there are half a dozen drug stores where trusses are fitted also. My impression is, where one truss is fitted by a physician, fifteen or twenty are fitted by other people. I do not know how the other members of the profession feel, but I recognize it as our own indifference and that we are responsible for it. I would like the experience. Some of the proprietors become skillful in fitting trusses, and the number of failures is quite small.

ACUTE BRONCHO-PNEUMONIA IN CHILDREN.*

BY G. W. MOREHOUSE, M. D., SPARTA, O.

In considering this disease, it is important to note the anatomical peculiarities of the lungs of a child under five years.

* Read before the Ohio State Pediatric Society, at Columbus, May 3, 1898.

There is a delicate meshwork of connective tissue, occupying relatively a much greater space than in the adult, and which favors abundant cell proliferation.

The bronchial tubes are relatively larger, as also are the epithelial cells lining tubes and alveoli.

The loosely bound bronchial membrane, lying in folds, readily sheds, and rapidly proliferates epithelium. The same is also true of the alveolar walls.

The rich vascular network enveloping bronchioles and air-cells readily engorges, favoring collapse of lung.

The chest walls are more soft and yielding. The throat, bronchial and chest muscles are less developed than in the adult, hence the expulsive power of the child's lung is correspondingly diminished.

The disease to be briefly considered, is an acute inflammation, involving bronchial lining membranes, connective tissue, bronchioles and air cells, in fact, every element of lung structure in severe cases. The inflammatory process extends in two ways—by contiguity of tissue, and according to Morrill, by the "migration of bronchial secretions acting as irritants in places which the advance of the morbid process in the usual way has not reached." Nature's usual method of epithelial repair after injury is pursued in this disease, although in an exaggerated degree—(1) "A rapid desquamation of epithelial cells replaced by embryonic cells, which are proliferated and shed;" (2) "small round cells invade the coats of the smaller bronchi." The disease may effect scattered lobules, usually in the posterior portions of the lower lobes. The inflammation of the connective tissue immediately surrounding terminal bronchi and air-cells, is, according to Keating, a cause for collapse by direct pressure. Pus replaces the bronchial secretions as the disease advances. Pus is also secreted by the affected air-cells. (3) "Occasionally all, or nearly all the smaller tubes in a single lobe are involved, resulting in a condition called 'lobar broncho-pneumonia.'"

Pleuritis seldom with effusions, limited to inflamed

portions of the lung, and bronchial and vesicular emphysema, occur. Collapse of air-cells more or less extensive is the rule. This occurs from various causes: The ball valve action of small plugs of mucus, first mentioned by Gaudner; the aspiration of pus into the air-cells in the later stages of the disease; and the choking of the terminal air passages from perialveolar inflammation as pointed out by Keating, together with the weakened expulsive powers from protracted illness, etc.

(4) "Under the microscope, the alveolar walls are found to be lined with young germinal cells highly nucleated, and the lumen of the alveoli is filled with these and with mature epithelial cells in various stages of fatty degeneration, as shown by the presence of oil globules. This change in the inflammatory product is favorable, constituting as it does, an absorbable emulsion. Moisture tends to bring about this condition; hence the more acute the attack and the higher the blood pressure, the better are the chances of speedy and complete recovery, as concerns this one result of a complex pathological process. Leucocytes, serum, and occasionally fibrin are found in the alveolar cavities, but the latter if present is seldom of any amount or of firm consistency. Blood is rarely observed. On the other hand, the products of inflammation may be found in a condition of commencing caseous degeneration, which is probably the starting point of a large number of pulmonary phthises in children."

The disease is much more common and fatal in children than the croupous form of pneumonia.

Cases complicating measles or whooping cough furnish the largest mortality. Dr. Morrill has collected 325 cases from various sources, the mortality in which was 48.3 per cent. The younger the child, the more unfavorable the prognosis. Variations of temperature, season, dentition, ill health from various causes, as bronchitis, ricketts, typhoid fever, measles, pertussis, etc., are exciting causes.

As to duration, the disease is variable. Dr. J. Lewis

Smith has reported a fatal case in twelve hours after invasion. Cases may endure many days or weeks of the disease and recover, or finally die from exhaustion or one or more of the numerous sequelae. The commencement of the disease is sometimes so insidious and deep-seated that it is difficult to recognize it in the midst of a bronchitis. Dr. Smith has reported an autopsy in which the disease occupied a portion of lung no larger than the size of a split pea. The case, of course, had died from another disease.

Usually, the rational symptoms will point to either a croupous or a broncho-pneumonia.

This disease is nearly always preceded by other illness, as before stated. If in a bronchitis with a temperature of 102° or 103° , there occurs a sudden rise, say to 105° or more, we should suspect invasion of deeper lung structure.

The febrile movement is more variable in this disease than in croupous pneumonia. The pulse respiration ratio of that disease is wanting. Paroxysms of dyspnoea are common in the course of broncho-pneumonia. The breathing is upper thoracic, while the lower chest and abdominal walls retract at each inspiration. The pause which normally follows expiration occurs before the act. If the patient is under five years of age the probabilities are strongly in favor of broncho-pneumonia. Often only when the disease is fairly well established can a positive diagnosis be made.

In the more advanced stages, persistent sub-crepitant rales are heard over one or more portions of lung. Weak and blowing breath sounds may be heard over consolidations. Bronchial breathing, broncophony and marked increase of vocal fremitus are usually practically absent, and over collapsed areas of any extent, inspiratory sounds and vocal fremitus may be entirely wanting.

Dullness on percussion may be found along both sides of the spinal column in extensive collapse. Dullness is present over an entire lobe in the "aggregate" form.

Broncho-vesicular breathing and hyper-resonance over upper front portions of chest may exist, indicating compensatory emphysema. Convalescence occurs by lysis instead of crisis, as in lobar pneumonia. Among complications and sequelae may be mentioned in addition to those previously named—pneumothorax, chronic pneumonia, tuberculosis, gastro-enteritis, meningitis, eclampsia, and more rarely, extensive plastic pleurisy or pleuritic effusions, serous and purulent, and gangrene of lung.

Prophylaxis by hygienic measures should include as far as possible thorough disinfection of nose, mouth and throat during the course of any illness. This may be done by the use of various antiseptics. The milder drugs are to be preferred in children. For the nasal cavity, a good one is R. Menthol, gr. ij; ol. encalyptus, ʒss; ol. cubeb, mx; ol. gaultheriae, mx; vaseline, ʒss; make an ointment. Apply a portion within each nostril three or four times a day.

A simple mouth wash may be used, consisting of aqua cinnamoni, or aqua gaultheria, or aqua menth., piperitae, given in half teaspoonful doses or applied with soft swab to the surfaces of the oral cavity as often as required. Per oxid. of hydrogen, 10 vols. strength, diluted with an equal quantity of water, may be used in the same way. Sordes should be cleansed from teeth by gentle rubbing with soft cloth. It is reasonable to believe that foul odors inhaled from mouth and nose during a protracted sickness carry infection to the deeper air passages, and assist to excite and prolong the diseased condition. At least the danger of local affections, as ulcerative stomatitis and gangrene, will be reduced to the minimum by keeping clean nasal and oral cavities.

I believe this point can not be too strongly insisted upon. The writer vividly calls to mind a case occurring in his practice eight years ago. A boy five years of age had broncho-pneumonia complicating whooping cough. The disease had progressed about five weeks, and apparent improvement was taking place as regards the lungs,

but a gangrenous patch beginning at the upper labio-alveolar junction extended rapidly over upper lip, nose, and right cheek causing a fatal termination in a few days. I have regretted that precautions of cleanliness as previously recommended were not taken in this case.

Local applications to the chest, as counter-irritants, poultices, etc., are of doubtful utility. A well padded jacket made to loosely fit the chest over the flannel undershirt, and open on the back, is all that is needed. This covering facilitates examining the lungs from time to time with the least disturbance to the patient.

For the disease, per se, stimulating expectorants are indicated from the beginning. Senega, squill, ammonium chloride and carbonate are among the most efficient drugs for this purpose. My practice is to avoid as much as possible the administration by the mouth of unpalatable and irritating drugs to children with prolonged illness.

The lower bowel in the child is a convenient receptacle for medicine and nourishment which we can not afford to ignore. When the child refuses to take the requisite amount of food to sustain the vital forces, when the medicine we desire to give becomes obnoxious to the palate and stomach of the little patient, then it is we have recourse to a means of retaining life, when other means have failed. The lower bowel, when carefully managed, will retain and absorb food and medicines for a variable period, sufficient often to enable an exhausted stomach to regain its normal function. Carbonate of ammonia, a most useful drug in this disease, yet exceedingly unpalatable, and often irritating to the stomach in any efficient dose, however well disguised, can be given by enema in watery solution, 10 to 30 grains every three to four hours, with little or no discomfort to the patient. In a course of rectal medication and feeding, my practice has been to irrigate with tepid water every three or four days to remove irritating debris. The organ can thus ordinarily be kept in a good condition for retention and absorption. If, despite these measures, enemata are not

retained a sufficient length of time, a few drops of laudanum may be used according to age. Egg and milk constitute the best nourishment for rectal use. One egg, well beaten in a teacup of milk, may be given every four to six hours, or a less quantity, according to ability to retain. Fever, which at times reaches a high point, may be treated by tepid bathing. A dose of acetanilid, one-half to two grains, may be given once or twice in the 24 hours. The flagging heart should be supported by aromatic spirits of ammonia, carbonate of ammonia, caffeine, and strychnia.

Extreme dyspnoea due to atelectasis, may be relieved by an emetic dose of ipecac, guarding the patient against exhaustion.

To recapitulate: Encourage expulsion of bronchial secretions by means of stimulating expectorants. Coughing to a certain extent is highly conservative in this disease. Of course, children usually swallow their sputa except when vomiting occurs.

Support the powers of life by proper continuous feeding, if necessary per anus.

Keep clean mouth and nose cavities, and in fact, the entire body and surroundings of the patient. The face and hands of the child should be kept scrupulously clean.

The child will pick at its nose and mouth, and beneath the finger nails filth might be embedded, a fertile source of infection if not disposed of. Per contra, fingers will become infected from nose and mouth, and sores will often form upon them, if this point is not carefully observed.

During convalescence, cod liver oil, the iodide of potassium or syrup of the iodide of iron may be found useful to promote resolution, if the lungs are tardy in regaining their normal condition.

In such case also, tincture iodine four per cent. may be applied over diseased areas. I have thus merely outlined the treatment, which will be modified according to peculiarities of individual cases. Knowing, as we do, the possible serious sequelae of this too often formidable dis-

ease, we should guard our patient with sedulous care through a tedious convalescence, and invariably warn parents and friends of the dangers besetting the way.

DISCUSSION.

DR. WARNER: I was very much pleased with what Dr. Morehouse had to say in his paper, but there is one thing to which I cannot quite agree, either with Dr. Morehouse or some other authorities; that is the matter of poultices and external applications being of no benefit. There is one thing that has stood the test of time and it is impossible to drive it away, and that is to encase a child with bronchial pneumonia in a large flax seed meal poultice. It unquestionably contributes to the comfort of that child. The child secures rest. There is a tendency for the fever to fall. A tendency toward the very thing Dr. Morehouse urges us to encourage, expectoration of the accumulated products.

There is one remedy I want to impress upon the gentlemen, the Doctor has not mentioned, that is strychnia. For a small child 1-200 grain doses some two hours apart. The dose can be increased according to age. In a short time the heart's action becomes enfeebled; the strychnia increases the strength of the heart and maintains it.

Another thing in broncho-pneumonia I believe is of value and that is to watch the temperature and when very high give a tepid bath or sponge with tepid water, not cold. Tepid water will bring the temperature down equally well with cold water and is far more grateful. In this way one encourages sleep and rest, and consequently a greater likelihood of the patient's recovery.

I wish I might say something that would guard against the production of broncho-pneumonia as the result of whooping cough. We see it occurring frequently. In the way of prognosis I believe we have to be far more guarded, for the reason that the cause is going to continue to operate right along. We have to give a doubly guarded prognosis.

DR. BELT: I took a great deal of interest in the

paper our friend has read. I have been in the habit of using a drug I did not hear mentioned. Of all the expectorants in the field of medicine, I have become a very close friend of apomorphia. It is the only thing you can use from the first day of life to the last. It is good for a different reason than most expectorants. Most of them produce expectoration by nauseating, apomorphia from the nerve center. I use it nearly always. As I did not hear it mentioned, I wondered if I were far away from the accepted field. Of course there are cases where it should not be used, but the more familiar one becomes with it, the more places he will see where it should be used.

DR. E. F. WILSON: I want to agree with the last speaker in regard to the use of apomorphia. I want to make plainer the way in which it should be used. It is commonly given with other drugs. It should be used by itself. After standing a couple of days it decomposes. Another thing not well understood is the dosage. It need not be very great. In an adult, 1-30 of a grain every hour or two will produce good results. In a child, 1-60 to 1-80 is sufficient.

I wish to disagree with Dr. Warner in regard to the poultices. I think he is surgeon enough to agree with me that it is the dirtiest thing that has come down to us from antiquity. It is dirty and sloppy, makes the mother mad and the nurse out of patience, and it does no good. You can make a wool jacket and cover it with oil silk. It is clean. It can be opened and the child washed and the child will not catch cold.

DR. DUNHAM: I did not intend to say anything, but I certainly must make a few remarks in regard to what the Doctor has just said. I rather lean to the position Dr. Warner takes. I have had some experience in treating children and I can say I have seen a great deal of good from a poultice. When I thought the patient would surely die, I have put a poultice on and received good results. While it may not be as pleasant or as nice as a wool jacket, I think it is a little quicker and better. I can look back and see many cases where I think the patient

would have died had it not been for the poultice. I want to use the best things, but there are many things the baby may not like or the mother either, still I cling to the poultice where I think it is needed.

As to apomorphia, I use it very frequently and think it an excellent expectorant.

DR. WARNER: In the main I am quite willing to agree with the gentleman from Kenton, but that you can always use apomorphia with an equal degree of success, I wish to take issue. There is one place you have to be extremely careful and that is where you have very great heart depression. I do not think he will contend that it does not produce some depression, and you have to be careful. That is where I want to emphasize the use of strychnia, where you have great depression. I have seen some unfortunate results that have made me a little chary of the use of apomorphia, under these circumstances. When you find great depression, especially in a young infant, you have to be very cautious about its use.

As to the poultice, it is only what we find described in our books. One physician recommends and another urges against its use. One point the Doctor makes that I do not believe is true, and that is that it is objected to by the parent. On the contrary, it is more frequently welcomed than anything else you can use. Of course this is no argument for its use, but it is an answer to his statement that it is objected to by the parent. It is doubly welcomed when they see the infant fall into a peaceful sleep with the cough lessened.

DR. MOREHOUSE, closing: On account of the noise perhaps, the Doctor failed to hear the mere mention of the use of strychnia.

I am very thankful, gentlemen, for your discussion, and have nothing further to say to prolong it.



DR. S. W. KELLEY.



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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

IN UNCLE SAM'S SERVICE.

Dr. S. W. Kelley, editor of the CLEVELAND MEDICAL GAZETTE, is now at Tampa, Florida, where he is serving as Assistant-Surgeon with the Third Cavalry. His appointment was received from Surgeon-General Sternberg, on the ninth of July, and he left the city immediately to take up his army duties. Dr. Kelley has suffered from war fever ever since the first gun was loaded, but ill health during the winter and spring prevented him from applying for a commission at that time. He now seized the first opportunity to start for the front, where, as he says, he hopes to see something of the war.

During the Doctor's absence, he expects to keep in touch with the GAZETTE, and will write occasional communications for this journal, which cannot fail to be of great interest to his subscribers.

Advantage has been taken of the doctor's absence to present his portrait to the readers of the GAZETTE and it appears in this number.

C. W. S.

ANIMALS IN THE CITY.

The policy of keeping animals in the city is a good question for debate. Stables generally have become a recognized nuisance, and their construction is therefore greatly restricted in thickly settled portions of towns. The pig-sty and slaughter house have long since been relegated to the extreme outskirts. Cows and other cattle are nearly extinct, and the horse, dog and cat are about the only domestic animals left to enjoy modern life inside the gates. Of these three, the horse is probably the next to go. Electricity is fast becoming the motive power for all city transportation, and it is just to expect that the horse is soon to be substituted by artificial power, to such an extent that, in the interests of hygiene, he may be banished from town altogether. The watch dog and the cat may be retained to some extent as a compromise, being the least of certain evils, but the healthfulness of our cities, other things being equal, demands the banishment of domestic animals altogether.

Were it not for loose garbage and filth, here and there, scavengers like rats, and other vermin, would be compelled to live upon the carcasses of one another and the city would soon be rid of all. Such an ideal state of affairs with clean streets, rat-proof walls, a proper disposal of garbage, and improved sewers, constantly flushed with flowing water, is to be desired; and many are the steps which the cities of civilized countries have taken to lead up to right living in these respects. Let the good work go on.

C. W. S.

THE TARRED STICK.

The old saying that a tarred stick cannot be handled with impunity is a fairly good illustration of the present situation in Cuba. It is likely to be a difficult matter to keep yellow fever from our shores, and also many other undesirable conditions which are common to that section of country.

The precaution of burning shanty property and infected villages has been resorted to, but notwithstanding all precautions, our union boys have many cases of yellow fever in their ranks. It is very difficult to maintain the rules of hygiene in such a land and under such circumstances. One of the officers of General Lawton's brigade wrote home, that up to that time, about July 6, he had not had a change of clothing, nor could he get a bath. He was one of the first to land, and probably represents a general condition which obtained among the officers and troops near Santiago.

In relation with the present epidemic of yellow fever in Cuba, it may be of interest to note the following statements made by Surgeon General Walter Wyman, of the U. S. Marine Hospital Service, in an address to the Cleveland Medical Society, December 18, 1896.

He said that "of the nineteen epidemics of yellow fever reaching the shores of the United States since 1864, sixteen of them can be traced directly to the city of Havana. The Surgeon General communicated the facts in this matter to the Secretary of the Treasury of the United States, and the Secretary wrote to the Spanish government officials, asking that steps be taken by them to rid the port of Havana of its dangers in that direction, which might probably be effected by proper drainage and other hygienic measures."*

If better hygienic conditions are to be brought about, it will now probably devolve upon the medical authorities of the United States to take the initiatory.

C. W. S.

*Cleveland Medical Gazette, January, 1897.

DEAD BEATS.

We believe the time is ripe for the regulation of the "Dead Beat" evil. In our investigations throughout the city along this line, we have found where the smouldering fires of indignation have broken out against these people and physicians in many localities have united to protect themselves against them.

It is right and just. The "dead beat" exacts the most from, and gives the least to, the physician. He is the one that calls you out at all hours of the night, puts you to the greatest discomfort, all for nothing.

The physician is quick to mercy and slow to wrath, but he is beginning to realize that that part of his earnings which should represent his savings are largely eaten up by these parasites. We do not believe this evil can be totally eradicated, but we do believe that it can be kept within bounds, and that is what we propose to do.

On the other hand, we must admit that the poor business qualities of many physicians tend to propagate this evil. The business side as well as the professional side of medicine should be looked into. We feel that we need just as much protection from the physician who knowing a person to be a dead beat does business for him without a vigorous effort to collect. Very often people believe that services given for nothing are worth nothing, and will patronize and pay one's competitor if he is a better business man, and insists upon payment, although he may not be a particle better, professionally speaking, than himself.

It is proposed to unite the profession of Cleveland upon this question, by publishing a convenient list of delinquents semi-annually, at first cost, for an easy reference by the physician, to rid the profession as far as possible from these annoying parasites.

The columns of the GAZETTE are open for discussion and suggestions along this line.

W. C.

Among Our Exchanges.

As the treatment of disorders of the stomach is passing out of the domain of empiricism into that of scientific therapeutics, every simplification of the tests whereby the presence of abnormal products can be determined becomes of interest to the general practitioner. Uffleman's test has been hitherto most relied upon to determine the presence of lactic acid in the stomach—a product of fermentation stagnation from either obstruction or defective motility. But Uffleman's test is open to the objection that alcohol, sugar, butyric acid, the phosphates, etc., when present in small quantities, as they often are, give a coloration so like that of lactic acid as to deceive all but the very expert, so that it is necessary to extract the specimen of the gastric contents with ether, evaporate to dryness, redissolve the residue, and then test—a process requiring considerable time, so much time, in fact, as to tempt the busy practitioner to chance a reliance on the other factors which enter into the diagnosis and which requires less outlay in apparatus and less consumption of time, of which he has none too much at his disposal. In the search for a test, rapid enough to be practicable, and accurate enough to be of clinical value, DR. J. P. ARNOLD would seem to have been successful.¹ He has run upon a reaction which is not interfered with by alcohol, glucose, butyric acid, acetic acid, and the phosphates unless present in quantities of two per cent. and over; which is not disturbed by the presence of acetone, albumoses, albuminoids, or peptones, and which sulphuric, nitric, or hydrochloric acids do not give. The test solutions are as follows: No. 1.—Alcoholic saturated solution; gentian violet, 0.1 c.c.; distilled water, 250 c.c. No. 2.—Solution ferric chlorid (U. S. P., 1890), 5 c.c.; distilled water, 20 c.c. No. 1 should be freshly made at least once a month. Into a small porcelain capsule or test-tube is put 1 c.c. of No. 1, and from a pipette one drop of No. 2 is added. The violet color of No. 1 is changed to a bluish violet on the addition of the ferric chloride. To this mixture is added—drop by drop—the filtered gastric contents. If lactic acid, or the lactates be present, the color of the test mixture is changed to a green or yellowish green. When but small quantities of lactates or lactic acid are present, or when but a small amount of gastric filtrate is used, the reaction may be plainly seen at the line of contact be-

¹ *University Medical Magazine*, April, 1898.

tween the drop and the test mixture, even though there be not enough acid to change the color of the whole mixture. One drop of a 0.2 per cent. solution of lactic acid gives a distinct reaction, whereas Uffleman's test is sensitive to only a 0.5 per cent. solution. If there be present a large quantity of phosphates there appears at first a reddish violet color, but in the course of a second or two this gives way to the characteristic green. If phosphates be present, to the amount of 0.5 per cent., it may take two or three drops of a 0.2 per cent. solution of lactic acid to give a distinct reaction. As the color reaction is due to the change of the iron from a chloride to a lactate, — the gentian violet acting merely as an indicator, — this test is available for quantitative analysis as well, and is sufficiently accurate for all clinical purposes. To 75 c. c. of distilled water add 0.2 c.c. U. S. P. lactic acid and you have a 0.2 per cent. solution — the U. S. P. lactic acid containing but 75 per cent. absolute lactic acid. Take two small test-tubes of equal size and in each one pour 5 c.c. of test solution No. 1, and add to each 5 drops of No. 2, from a pipette. Into one tube pour one-half c.c. of the 0.2 per cent. lactic acid solution — the mixture turns green. From a graduated pipette, drop the filtered gastric contents into the other tube — drop by drop — till its color corresponds exactly in shade with that of the first tube. For greater accuracy in comparing the shade of color, equalize the volume of liquid in the two tubes by the addition of distilled water. Divide 0.1 by the number of c.c. of gastric contents used to match the shade in the control tube and the result gives approximately the percentage of lactic acid. With a little practice and care, the error of the estimate need not exceed 0.1 per cent., which is amply accurate for general clinical purposes, and may be brought as low as 0.05 per cent.

The improved principle upon which DR. SAYRE treated fracture of the clavicle, viz.: by drawing the distal fragment upward, backward and outward by means of its connection with the shoulder, and retaining it in position by fixing the arm and elbow and hand by means of adhesive plasters, still remains the best method of treating such cases if they are to be allowed to go about. In practice, however, while the horizontal adhesive strip which surrounds the upper arm on the injured side and is carried across the back at the level of the lower third of the scapula, forming the fulcrum of the lever by which the shoulder is carried backward — while that strip usu-

ally holds pretty well, the strips which pass from the sound shoulder around underneath the opposite elbow are almost certain to slip, and they slip very quickly in warm weather, and when they slip they not only lose their efficiency, but they are only too apt to roll up into a cord over the sound shoulder, becoming very uncomfortable if not actually painful, and excoriating the skin. To remedy this defect, DR. J. W. HENSON, of Richmond, Va.,² substitutes a harness of denim, unbleached jeans, or other stout cloth, and made as follows: Over the sound shoulder and axilla there is fitted a cap with an arm-hole to allow free motion to the sound arm, and so cut as to distribute the pressure equally upon the shoulder, and upon the chest wall below the axilla. Anteriorly, the cap extends to the opposite nipple—and posteriorly, to a point a little beyond the median line. Its lower border is about on a level with the eusiform cartilage in front and a little below the lower border of the scapula, behind. Its upper border begins about the level of the nipple anteriorly, extends over the shoulder well up toward the root of the neck, crossing the clavicle at about the junction of its middle and inner third, and passing diagonally down across the back to meet the line of the lower border a little beyond the median line. The posterior extremity is pointed, the anterior varies in width from one and one-half to two and one-half inches, according to the size of the patient. To the anterior extremity there should be attached a buckle and also another to the posterior extremity. These buckles are for the attachment of the elbow piece. Under the anterior surface there is to be made a pocket for the patient's hand. The pocket should reach upward and outward quite to the top of the shoulder and be just wide enough to accommodate the hand. The elbow piece is cut from the same stout cloth. It is a narrow, oblong piece wide enough to accommodate the elbow and long enough to reach from the middle of the arm to the middle of the forearm when extended. Upon each end should be fastened a tape to match the buckle in the shoulder cap, and from one and one-half to two inches forward of the middle should be cut a hole for the reception of the olecranon process. Now for the application: The horizontal adhesive strip is applied just as in Sayre's method. The cap is fitted on the sound shoulder, the hand of the injured limb thrust into the pocket under the anterior surface. The elbow piece applied to the already flexed

² *Maryland Med. Journal*, April 9, 1898.

elbow, and the tapes buckled taut. A skillful seamstress may modify this. Instead of a plain elbow piece with a hole for the olecranon there may be a pocket made to fit and securely grasp the elbow; buckles may be replaced by buttons, but whatever the form of the fastening, the apparatus is cool, comfortable and doesn't slip, and, moreover, in the hands of its originator has given excellent results. A somewhat similar harness is used by DR. CHAS. H. FRAZIER, of Philadelphia,³ in treating fractures about the elbow joint by the method first advocated by MR. ROBERT JONES, of Liverpool, Eng., and successfully employed by DR. H. L. SMITH, of Boston, and DR. WM. J. WHITE, of Philadelphia, and others in this country. The method involves accurate replacement of fragments and maintaining the arm in extreme flexion by fastening the hand over the opposite shoulder and keeping it there until such time as passive motion is indicated. The limb from shoulder to wrist is left free from dressings of any kind, thus avoiding the possibility of any interference with the circulation of the limb, either by pressure or constriction, allowing also a daily inspection of the injured part without disturbing the limb in the slightest and permitting the early use of massage. Practically it is found by these gentlemen, that when either condyle of the humerus is broken and replaced, acute flexion of the arm locks the fragment in position between the coronoid process in front and the tense ligamentous and muscular structures behind better than any artificial splint can be made to hold it, and being in close apposition, there is less infiltration about the joint and less marked formation of callus.

DR. FRAZIER fits a sort of waist over the sound shoulder and under the axilla of the injured arm, extending downward to the lower border of the ribs. It laces on the side of the injury, from the axilla down. Upon the cap over the sound shoulder is fastened a mit lacing on the back. The waist is put on, the fragments replaced, the hand of the injured member laced into the mit on the sound shoulder and the dressing is complete. DR. FRAZIER reports six cases, with skiagraphs and photographs, with altogether enviable results.

³ *University Med. Magazine*, April, 1898.

New Books.

TREATISE ON THE DISEASES OF WOMEN. FOR THE USE OF STUDENTS AND PRACTITIONERS. By Alexander J. C. Skene, M. D., LL. D., Professor of Gynæcology in the Long Island College Hospital, etc., etc. Third Edition. Revised and enlarged, with 290 engravings and four plates in colors. New York: D. Appleton & Company, 1898.

The third edition of Dr. Skene's "Diseases of Women," which has recently appeared, affords striking evidence of the marked progress which has been made during the present decade in gynaecology. While bringing his text-book fully abreast of the times, and while recognizing the many new and useful additions that have recently been made to the science and art of gynaecology, Dr. Skene has shown a broad-minded and well-judged discrimination not only in his additions but also in his omissions. He has fully recognized the fact that all that is new is not necessarily better, but that, on the other hand, all that is old should not necessarily be retained. He speaks from a large experience and has not only put before us what he has thoroughly tested in his own practical work, but has also made abundant reference to that of other well known men in this country and abroad.

Of particular interest is the chapter in which he deals with the control of hemorrhage by compression and electrical heat. Of this procedure, Dr. Skene has made special study, and having thoroughly tested it and having perfected all the minor details, he claims that he now depends upon it almost entirely instead of using ligatures. Should this method on further trial be found equally reliable in the hands of other operators, there can be no question but that it will prove a valuable contribution to the general surgeon as well as to the gynaecologist.

Nowadays, when so much attention is given to the importance of an aseptic technique in operative surgery, we might have expected to find at least one chapter devoted more especially to this subject.

One distinctive feature of the book is to be found in the number of illustrated cases which oftentimes render the subject matter clearer.

We take great pleasure in recommending this book not only to the student of medicine and to the general practitioner, but also to the progressive gynaecologist, who will find in it much that will prove useful to him in his daily work.

ROBB.

A TEXT-BOOK ON THE DISEASES OF WOMEN. By Charles B. Penrose, M. D., Ph. D., Professor of Gynæcology in the University of Pennsylvania; Surgeon to the Gynæcean Hospital, Philadelphia. Illustrated. Published by W. B. Saunders, Philadelphia, Pa.

In this work we have one of the best exponents of the teachings of modern gynaecology. For the sake of brevity the usual chapter, or chapters, on anatomy, physiology and pathology have been omitted; but in a few instances the author has introduced a certain amount of pathology sufficient to render clear the subject matter. Necessarily in a book intended mainly for students a certain amount of dogma is not only pardonable but highly commendable. In treating of the various pathological processes, the author, instead of advising several plans of treatment for each condition, has given the one which he knows from actual experience to be of value, and thus avoids much confusion which might otherwise result in the mind of the student. Theories and disputed points have not received much attention and the tone throughout is thoroughly practical. Written mainly for students, the book will nevertheless prove valuable to the general practitioner and even to the specialist in gynaecology. The general style is forcible and to the point, and the methods advised have all been tested by long experience. The majority of the illustrations are very good. The publisher has done his work well and has presented us with an attractive volume. ROBB.

ATLAS AND ABSTRACT OF DISEASES OF THE LARYNX. By Dr. L. Grunwald, of Munich, authorized translation from the German. Edited by Charles P. Grayson, M. D., Lecturer on Laryngology and Rhinology in the University of Pennsylvania; Physician-in-charge of the Throat and Nose Department, Hospital of the University of Pennsylvania. With 107 colored figures on 44 plates. Philadelphia: W. B. Saunders, 925 Walnut street. 1898. Cloth, \$2.50 net. W. T. Galbraith, agent, 602 New England Building.

A beautiful and attractive volume nicely bound, neatly printed, carefully edited and an honor to the publishers. The colored plates are finely executed and the characteristic colors of diseased mucus membranes are closely imitated, giving to the possessor of this book at once an insight into many diseased conditions of the larynx which could otherwise be obtained only by years of personal observation. Opposite each plate is a short abstract of the history of the case to which each diseased

condition pertained. The first 100 pages is devoted to a brief description of the methods of examination, remarks on the causes and treatment of diseases of the larynx, pathology and treatment of acute and chronic inflammations. Neoplasms, disturbances of mobility, of sensibility, and of the circulation. Solutions of continuity, foreign bodies and malformations. C. W. S.

DISEASES OF THE SKIN: THEIR CONSTITUTIONAL NATURE AND CURE. By J. COMPTON BURNETT, M. D., author of "Ringworm: Its Constitutional Nature and Cure." Third edition, revised and enlarged. Philadelphia: Boericke & Tafel, 1898. Price, cloth \$1.00 net; by mail, \$1.07.

This small book contains in about 250 pages the author's views and experience relative to certain diseases of the skin, which he ascribes to constitutional conditions. He strives to maintain that "as each portion of the skin corresponds vitally with some internal organ or part, so the skin disease is often merely the outward expression of internal disease. That, in fine, the generally received external treatment of diseases of the skin, whether with lotions or ointments or whatsoever else, is demonstrably shallow in conception, wrong in theory, harmful in practice, and therefore inadvisable," etc. Many reports of his cases are recorded to substantiate the above claims, and to depict the dangerous sequelae likely to follow "suppressed" eruptions, some of the sequelae mentioned being angina pectoris, which was cured by treating the case "antipsorically," and double cataract, which is reported as having occurred after the cure of a disease of the scalp. The author says: "If the position which I take up be the true one, skin doctors are working great evil in the world, and sadly need enlightening; while, on the other hand, if they are right, * * * then I must be in the wrong, and wrong should everywhere be crushed like a nut under a steam hammer. Dermatologists! I ask no mercy, as I give no quarter."

The remedies which are said to bring about the wonderful results noted, are largely mixed in potencies, some as high as the "30th centesimal potency." C. W. S.

PRACTICAL DIAGNOSIS. THE USE OF SYMPTOMS IN THE DIAGNOSIS OF DISEASE. By Hobart Amory Hare. New second edition. In one octavo volume of 598 pages, with 201 engravings and 13 full-page colored plates. Lee Brothers & Co., Philadelphia and New York, 1897. Cloth, \$4.75.

New books on diagnosis and new editions of old books are evidences of the increased diagnostic acumen

of the physician of to-day. There is a demand for knowledge on instruments of precision and on exact diagnostic methods. Hare's *Practical Diagnosis* aims to supply this demand of the general practitioner. To make the subject matter accessible (a most important consideration), the book is divided into two parts and is furnished with an extensive index. The first part deals with the manifestation of disease in various organs; e. g., the eye, the skin. The second part groups symptoms; e. g., of coma, of cough, of fever.

This division is not to be entirely commended, as it necessitates a too violent separation of signs and symptoms, which might confuse a careless reader. Auscultatory signs are discussed in part first and cough in part second. Apoplexy is discussed in the first part and epilepsy in the second. The classification is thus sometimes forced. While division of a subject must be more or less arbitrary, it should be as natural and simple as possible.

The writer has grouped an enormous amount of facts. He has been especially successful in the symptoms referable to the nervous system. The eye is discussed almost entirely from this standpoint. Nearly one-half of the space devoted to the skin is given to distribution of nerve lesions. Diagrams and plates illustrative of disease of the nervous system are numerous and admirably selected. The chapter on hemiplegia is compact and valuable.

Most writers fail in discussing the physical signs of the chest. Why this should be, when such noble masters as Luenneec and Skoda have set such illustrious examples, is explicable only on the ground of the difficulty of the task. It is peculiarly difficult in studying the heart for a student to memorize the facts. It is like a blind man memorizing the names of colors. Unless a practitioner has had good training he is not sure that he hears what others hear. More time should be given, therefore, to explanations of the mechanism of murmurs and rales and their logical associations. More care should be given to the logical sequences of the various pathological changes, and to the normal sequences as well.

It is not enough to enumerate the facts surrounding an incompetent mitral; their mutual bearings should be more vividly illustrated. Then the facts would be remembered and appreciated. The author has rapidly marshalled his chest signs and made an instructive chap-

ter on the thorax. It is much more satisfactory than most effusions on this subject met in general treatises.

There is an evident effort to make the book practical. One test only for hydrochloric acid is given — the vanillin — phloroglucin test. The tests for sugar and albumen are not too numerous. The blood is treated simply and well. The book cannot fail of being of great usefulness to the readers intended.

The author is familiar with his subject and that perhaps leads him to write too rapidly. The iodine test in pleural effusions is not clearly put. In the case of ascites it is made very definite. Traube's space is indefinitely described. Oesophageal obstruction has been over-looked. But these are small things in a work where almost all is good and where there is so much that is commendable. The book is published by Lea Brothers & Co., and it goes without saying that it is well gotten up. Of typographical errors there are none, barring a slip or two in the index.

LOWMAN.

SEXUAL NEURASTHENIA. By George M. Beard, A. M., M. D. Formerly Lecturer on Nervous Diseases in the University of New York; Fellow of the New York Academy of Medicine; Member of the New York and King's Counties Medical Societies; of the American Medical Assoc. of the American Neurological Association; Author of "Hay Fever," "Stimulants and Narcotics," "Eating and Drinking," one of the authors of "Medical and Surgical Electricity," etc. Edited, with notes and additions, by A. D. Rockwell, A. M., M. D. Formerly Professor of Electro-Therapeutics in the N. Y. Post-Graduate Medical School and Hospital; Fellow of the N. Y. Academy of Medicine; Member of the N. Y. Neurological Society; one of the authors of "Medical and Surgical Electricity," etc. Fifth edition with Formulas. E. B. Treat & Co., 1898.

Books do good in various ways. Some few by actual knowledge accurately conveyed; others by a philosophical trend that stimulates our thoughts; others, by arousing within us a critical spirit of opposition that leads us to think and observe that we may successfully controvert the statements of the author.

The writer remembers the pleasure and profit derived from reading Fothergill's Handbook of Treatment. The pathological doctrines taught by that broad-minded physician twenty years ago are to-day obsolete. But his delightful empiricism remains in spite of the later day pathologist.

This book, which is the joint product of Drs. Baird

and Rockwell, contributes nothing to the pathology of neurasthenia, but to the clinical knowledge, and perhaps treatment, it is a contribution of value. If the measure of value is to be determined by the number of editions exhausted, then it is certainly great.

Neurasthenia is a neurosal stigma, and a functional confession that the structure of the nervous system is inadequate to bear the strain imposed.

Exalted sexuality or erethism is a stigma of an imperfect or unstable nerve organism. These people's whole lives center and circle about their sexuality. If they contract syphilis they become syphilophobiacs. If they fancy themselves weak or sexually impotent they become the willing prey of blatant quacks. Their whole lives are poisoned and tainted by an inordinate sexual introspection. Many of them poison the peace of mind of the physician by their insistent appeals for relief.

"More light," is the demand of the practitioner and to this appeal the book answers quite satisfactorily, but I doubt if the time is yet ripe for a book that will be a safe guide in the conduct of these cases. But the pleasing, thoughtful and philosophical view that the authors take of the subject atones, in part, for the shortcomings of to-day's knowledge of all the forms of neurasthenia, whether they have basis in a disordered nervous system that is laboring under inherited weakness, or the racking assaults of an exalted sexuality.

The neurologist will read the book and reject it, as containing too many half-truths, too few tangible facts; the surgeon will quarrel with the pathology, and point to the little attention devoted by the authors to the actual diseases of the organs themselves; but the general practitioner will read and think of its teachings, will respect its many truths, and will be carried along by the pleasing, lucid style to a closer observation and a more systematic, persevering treatment, and will cure more cases than all of the other fellows.

ALDRICH.

PAMPHLETS RECEIVED.

In most cases the pamphlets here mentioned will be forwarded to the interested reader by addressing the author and enclosing a stamp. Kindly mention *THE GAZETTE*.

EDWARD PYNCHON, M. D., Chicago: COLONO-ENTERIC IRRIGATION IN TREATMENT OF INTESTINAL OBSTRUCTION; from *Chicago Medical Recorder*.

L. DUNCAN BULKLEY, A. M., M. D., New York: NEUROTIC ECZEMA; from *Journal American Medical Association*.

HUNTER ROBB, M. D., Cleveland: THE TREATMENT OF RETRODISPLACEMENTS OF THE UTERUS; from *The Philadelphia Medical Journal*. THE OPENING OF THE NEW LAKESIDE HOSPITAL; from *The Cleveland Medical Gazette*. SUTURE MATERIALS AND METHODS IN CELIOTOMY; from *The Cleveland Medical Gazette*. RESECTION AND IGNIPUNCTURE OF THE OVARIES; from *The Cleveland Medical Gazette*.

J. J. BROWNSON, M. D., Dubuque, Iowa: INJURIES FROM LIVE ELECTRIC LIGHT AND TROLLEY WIRES; from *Tri-State Medical Journal*.

H. O. WALKER, M. D., Detroit, Mich.: THE SURGERY OF THE GALL BLADDER AND ITS DUCTS; from *The Medical Age*.

WM. H. WATHEN, A. M., M. D., LL. D., Louisville, Ky.: ABDOMINAL AND PELVIC SURGERY. EXTRACTS FROM CLINICAL LECTURES AND SOCIETY TRANSACTIONS. Reported by C. C. Mapes.

X. O. WERDER, M. D., Pittsburg, Pa.: TWO INTERESTING CASES OF INTESTINAL RESECTION WITH END-TO-END ANASTOMOSIS BY MEANS OF THE MURPHY BUTTON, WITH RECOVERY.

HOWARD PAXTON COLLINGS, B. S., M. D., Hot Springs, Ark. REPORT OF A CASE OF ACUTE DOUBLE HYDROCELE; from *The Hot Springs Medical Journal*.

CHARLES A. VEASEY, A. M., M. D., Philadelphia, Pa.: A CASE OF HYPOPYON KERATO-IRITIS OCCURRING IN A PATIENT DURING AN ATTACK OF TYPHOID FEVER; from *Ophthalmic Record*. A CASE OF BILATERAL SYPHILITIC ULCERATION OF THE PALPEBRAL CONJUNCTIVA; from *International Medical Magazine*.

E. P. HERSHEY, C. E., M. D., Denver, Col.: THE TREATMENT OF CHRONIC ENTERITIS; from *Western Medical and Surgical Gazette*.

J. B. MCGEE, M. D., Cleveland, O.: THERAPY OF THE HEMOSTATICS; from *Cleveland Journal of Medicine*.

Correspondence.

NEW YORK, July 18th, 1898.

To the Cleveland Medical Gazette:

The hospital ship *Solace* entered New York harbor July 17th. She had left her wounded at Portsmouth, in the army hospital, and was en route to the Brooklyn Navy Yard. She is a fine, large, new, steel steamer, of some 4,000 tons displacement, and attracted not a little attention as she came in. She is painted white with a broad green band, according to the Geneva regulations, and flies the Red Cross flag from her foremast. Her character is thus apparent immediately to every one.

Her length is 375 feet and her beam is 37. She makes 14 knots and can be pushed to 17 knots per hour.

I boarded her on the upper deck and was ushered at once into the ward room, where I met the officer to whom my introductions sent me. Off the ward room is the office of the senior surgeon, the dispensary and the general office. Immediately forward of these is the operating room. This was formerly used as a saloon. It has been repainted in enamel paint to a large extent. The deck is covered with rubber tiles that give a secure footing. It is large, light and airy. It is furnished with two iron enameled operating tables, nickle plated conveying boxes, sterilizing apparatus, glass basins, and all the surroundings of a well equipped surgical room. It is well provided with instruments and dressings. On the stationary tables are rucks, such as a landsman sees on the dining tables at sea in rough weather. Here the rucks are intended for retaining in place the basins, trays, sponges, instruments, etc., and are the only strikingly naval peculiarity of the room. From the ward room a broad companionway leads to a large mess room below for the convalescent officers.

Aft the boiler room, that is midship, are a number of staterooms for wounded officers. These are very comfortable and fitted with telephones, electric fans and bells. They are all outside and are very satisfactory quarters. Aft these is a convalescent ward for the men.

Directly below the operating room is a large ward, on the main deck, that contains 92 beds in tiers of two. Each bed is accessible from all sides, and is even too comfortable with its spring mattress. In a storm there is some risk of falling out of it. The ward is well lighted and ventilated. In addition to the air ports there are louvres by means of which a forced draught comes from blowers and keeps the air in the ward pure. Closets, hot and cold water and all conveniences are near at hand. This ward is connected with the operating room by means of an elevator by which a cot can be easily lowered. Aft the ward is the room for convalescent officers referred to above. On this deck are ice machines, laundry, drying room, and large steam sterilizers. Steam sterilizers are used for general disinfecting purposes. Aft all these is an emergency ward with provisions for fifty swinging cots. This ward is immediately below the convalescent men's ward on the upper deck. The junior

surgeons and nurses have quarters with the injured officers on the upper deck.

Provision is made in the after part of the promenade deck for contagious diseases. Such cases are thus well away from the wards and receive the free air from the sea and are well isolated. Altogether two hundred wounded can be comfortably carried, and many more could be handled if necessary.

Besides the regular line officers (captain, executive officer, navigator, deck officers, etc.) and crew of the ship, there are four surgeons, two apothecaries, ten nurses, stewards and special cooks for the wards.

The *Solace* was remodelled in thirteen days, and the work was admirably done. She is well arranged for her purposes as a floating ambulance. She brought from Santiago a hundred wounded. The Americans were well cared for. No sepsis developed among them. The wounded Spaniards had had very little primary attention and were in bad condition. Among the patients were a few cases of malarial and typhoid fever.

Last week the *Olivette* brought a hundred wounded soldiers to the marine hospital at Clifton, Staten Island. The majority of them were wounded in the head. This is explained by the character of the attack—the lines advanced flat, then rose and fired and advanced again. Thus the head was the most exposed part. There are many curious injuries of the scalp and skull among the wounded.

The *Solace* is the first hospital ship put in commission. She is another evidence of the intelligent energy of the navy. She is supposed to lie in the vicinity of the fleet, out of range of the enemy, and relieve the fighting ships of the wounded as fast as possible. Ingenious chairs and curtained cots are swung from the davits and easily and safely lift the injured as they are brought alongside. About one wounded man can be taken aboard every four minutes. Every detail seems to have been well thought out. The nation is to be congratulated on the *Solace* and her work. She is well worth a visit.

Very truly,

JOHN H. LOWMAN.

CLEVELAND, O., July 20, 1898.

Editor Cleveland Medical Gazette :

Dear Sir.—Having noticed and read the note of Dr. Wm. Clark on the dead beat, I will tell my experience:

In February, 1898, after consulting some of my neighbor physicians, I decided to try and get the physicians of the West Side to list the "beats." Calling in person on about 55 or 60 of the profession, I explained the object and method which was to protect us by having a printed list, giving names, addresses, occupations, amounts, and to what physicians due. Over 50 physicians promised to send in their lists, and after waiting nearly three months longer than agreed and with hard urging twenty-one lists were obtained and were printed with one exception, this list being in some way overlooked. It was very discouraging work, but I feel well paid, as the little book has been of much use to me. I will relate one experience. Was called in the night by a man to see his wife. I went, and told them I would call again next day, but before going I found he was listed by three physicians; when I did go I called the man into another room and told him we had a system by which we knew whether a man paid his bills or not, and, as he owed other doctors, I asked how I was to get my pay. He paid me five dollars before I left the house!

We expect to revise our list this fall and hope to have many more physicians with us.

Those who sent lists received a printed copy of them by paying the price of printing.

U. S. L. SHIRKEY, M. D.

1357 Lorain street.

AMERICAN MEDICAL ASSOCIATION.

WILLIAM B. ATKINSON, M. D.,

Permanent Secretary,

1400 Pine Street, Southwest Cor. Broad.

PHILADELPHIA, June 30, 1898.

Dear Sir.—At the recent meeting of this ASSOCIATION the following was unanimously adopted:

WHEREAS, the AMERICAN MEDICAL ASSOCIATION did, at Detroit in 1892, unanimously resolve to demand of all the medical colleges of the United States the adoption and observance of a standard of requirements of all candidates for the degree of doctor of medicine which should in no manner fall below the minimum standard of the Association of American Medical Colleges; and

WHEREAS, this demand was sent officially by the Permanent Secretary to the deans of every medical college

in the United States and to every medical journal in the United States, now therefore the AMERICAN MEDICAL ASSOCIATION gives notice that hereafter no professor or other teacher in, nor any graduate of any medical college in the United States, which shall after January 1, 1899, confer the degree of doctor of medicine or receive such degree on any conditions below the published standard of the Association of American Medical Colleges, be allowed to register as either delegate or permanent member of this ASSOCIATION.

Resolved, That the Permanent Secretary shall within thirty days after this meeting send a certified copy of these resolutions to the dean of each medical college in the United States and to each medical journal in the United States. Respectfully yours,

WM. B. ATKINSON, *Permanent Secretary*.

Notes and Comments.

Columbus will be the next meeting place for the American Medical Association, on the 7, 8, 9 and 10 of June, 1899.

Dr. S. W. Kelley has accepted an appointment as U. S. Assistant-Surgeon and is now pushing to the front. He is at Tampa, Fla., with the Third Cavalry.

Dr. W. E. Shackleton has returned from a six months' trip abroad. Most of his time was spent in the Royal London Ophthalmic Hospital (Moorfield's), and in the Central London Throat Hospital.

Dr. Joseph E. Winters, Professor of children's diseases of the new Cornell Medical College, was recently the guest of Dr. J. H. Lowman, of this city.

Dr. D. S. Perkins, whose office has been at 1226 Euclid avenue, has been compelled to give up business in this city, and go west in search of health. He hopes to be able to resume practice at an early date, possibly at Denver, Colo.

Dr. Geo. Seeley Smith was recently appointed assistant to the department of Genito-Urinary work in the Western Reserve Medical College. He has exchanged his office for that formerly occupied by Dr. D. S. Perkins, in the same building, at 1226 Euclid avenue.

Dr. W. A. Knowlton, of 530 Jennings avenue, has found a little rest necessary for use in carrying on future work, and left the city early in July for one of those delightful trips up the lakes. It is sincerely hoped that the doctor, who has done much of his share of the medical work in this locality, may return greatly refreshed by his journey.

Dr. E. S. Lander has exchanged his office quarters in the Permanent Building for office rooms in the Osborn Block.

Dr. R. D. Fry, of Cleveland, has received a commission as Brigade-Surgeon of Volunteers with the rank of Major.

Dr. Wm. E. Brunner and wife are enjoying cottage life on the banks of Lake Erie, where the Doctor can reach town during business hours.

Dr. Shackleton recently received the appointment of rhinologist and laryngologist on the staff of the St. Alexis Hospital.

Dr. A. R. Baker is enjoying the "Dewey" nights at Villa Beach, where he has a cottage, and does business as usual in the city during the day. This is a fine way for a busy man to enjoy life with his family in the country and we trust many may follow the Doctor's example.

Dr. F. K. Smith has left Cleveland to make his home in Warren, O. The Doctor has left many warm friends behind him, and we are glad to know that he is still near enough to make himself heard, and his influence felt, among his old associates.

In an **Original Article** appearing in a previous number of this Journal, a few direct quotations were made from an article appearing in a leading contemporary, no credit being given to the source from which they were derived, other than marks of quotations which were used. This matter has been commented upon privately, calling attention to the fact that the policy of the GAZETTE is well understood to be correct, but the impression was carried that the attention of the contributor should be called to the lack of just dealing in this important matter.

The GAZETTE certainly desires to give and take credit wherever credit is due.

Miss May Bushey, who has been matron at the private

hospital of Dr. W. Humiston, on Scranton avenue, for the past year, has accepted an appointment as an Army nurse and is to report to Major Carter at Chickamauga Park, Ga., for present duty, where there is considerable sickness among the troops; there being about 80 cases of typhoid fever at the present time. Miss Bushey is a nurse of good attainments and she is to be congratulated on her appointment.

Trained Nurses. Cleveland is getting an ample supply of trained nurses. Each year gives us an increasing number of splendidly qualified young women for this merciful and important work. The employment of trained nurses has never become as common a custom in this city as it should be, and as in time it will be. The fault in this lies partly with the public, more with the medical profession, and to a large extent in recent years with the stringency of the times. On June 14, the Training School for Nurses of the Cleveland General Hospital held its annual commencement exercises and with appropriate ceremonies graduated the following young women, who we trust will find their services frequently demanded and duly appreciated by both profession and public: Misses Mattie M. Decker, Linda W. Sampson, Anna Laughlin, Ella Benson, Genevieve DeCelle, Minnie E. Yates, Kathryne Murphy, Jessie M. Neilson, Alice Reeve, Mabel Moneysmith, Martha McGarvin, Lucile M. Smith, Helen W. Thompson, and Ella Spencer. The Cleveland General Hospital will supply a trained nurse, on call, day or night.

Mrs. Sanders, wife of Dr. J. Kent Sanders, a prominent physician of Cleveland, died July 20, of peritonitis, following appendicitis. Mrs. Sanders was the daughter of Mr. C. A. Otis, a former mayor, and one of the most prominent citizens of Cleveland. She leaves no children.

The Following Notice which has recently been sent to physicians is heartily indorsed:

The Council of the Cleveland Medical Library Association takes pleasure in notifying the members of the Association and also all other physicians of the city that the Library and Reading Rooms at 586 Prospect street (near Perry) are now ready for use. The Library is open daily, except Sunday, from 10 A. M. to 12, from 1 to 5 P. M., and from 7 to 9 P. M. Donations of books, journals (bound or unbound), pamphlets, etc., will be thankfully

received, and also gifts of any pictures that may be appropriate.

To persons not already members of the Association we extend a special invitation to call and see the Library. You will then, we trust, decide to become a member, that you may enjoy the facilities already offered and also that you may by your connection with the Library help it in its development toward greater usefulness.

The annual dues for active membership are ten dollars (\$10.00), which sum entitles the member "to the privilege of voting in the election of officers and trustees, together with full use of the Library." Subscribing members pay thirty dollars (\$30.00) the first year and ten dollars (\$10.00) annually thereafter. They only are eligible to the office of trustee. We have also what is known as a reading membership, about which full information can be obtained from any of the officers of the Association.

H. E. HANDERSON, M. D., *President*.

W. E. BRUNER, M. D., *Secretary*.

Applications for membership may be made to the membership committee:

W. H. HUMISTON, M. D., 122 Euclid Avenue, Chairman,

J. B. MCGEE, M. D., 1405 Woodland Avenue,

J. KENT SANDERS, M. D., 106 Euclid Avenue,

A. F. BALDINGER, M. D., 670 Euclid Avenue,

L. B. TUCKERMAN, M. D., 298 Central Avenue.

Dr. J. J. Erwin has been commissioned as Assistant-Surgeon in the Tenth Regiment O. V. I., with the rank of Captain, and has started for the fields of duty with the Cleveland Grays and Naval Reserves of Cleveland.

The Ohio State Board of Health has elected the following officers: President, Dr. R. D. Kahle, of Lima; Vice-President, Dr. Joseph Hartzell, of Canton. Secretary, Dr. C. O. Probst, of Columbus, re-elected.

Doctors' Fees in Pioneer Days. Dr. Weeks, of Clarksfield, sends us a facsimile of an entry in an old account book in his possession. It reads: "1820. July 15, To paying Doc. J. Fay for 2 pukes, 25".

Buzzards and Christian Science. On our ride to Xochicalco, we chanced upon a valuable piece of information, which I do not feel like withholding from this superstitious age, and I think it will be of great use to our mind curists and healers. When I wondered at the size of the buzzards we encountered, our guide, who was a volunteer guide and a man of standing and perfectly trustworthy, informed me that this bird was really a crow and not a

buzzard, as I had thought, and it is not merely an ornamental and thieving bird. This is what he told me:

If any man has heart disease or is threatened with it, organic or otherwise, all he needs to do is to catch one of these crows and make a companion of him, a real intimate. He must keep him by him constantly, let him eat from the same plate at table and sleep with him at night. When this intimacy is established, all the man's heart disease and tendency to it will leave the man and pass into the crow. The testimony to this fact is abundant and admits of no doubt, and the singular thing about the miracle is that the crow is not injured. The crow, by an entirely mental process common in all mind cures, absorbs the heart disease and sustains no harm and asks no pay for his work.

This Christian Science crow is, to be sure, a Mexican, but I suppose that any kind of a crow with us would do as well.—*Charles Dudley Warner in Harper's Magazine.*



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**IS THE MOST POWERFUL HEALING
AGENT KNOWN.**

These Remedies cure all Diseases caused by Germs.
Successfully used in the treatment of Chronic and Acute Ulcers
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**Skin Diseases, Eczema, Psoriasis, Salt Rheum,
Itch, Barber's Itch, Poisoning Ivy, Acne, Etc.**

Hydrozone, applied to any open diseased surface, destroys the pus leaving the tissues beneath in a healthy condition. Then Glycozone, being applied to the clean surface, stimulates healthy granulations and heals the sore.

Inflammatory and Purulent Diseases of the Ear. Otitis Media, Etc.

By means of a glass syringe, inject Hydrozone, either full strength or diluted, and complete the dressing with a small roll of cotton well impregnated with Glycozone.

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Physicians remitting 50 cents will receive one complimentary sample of each "Hydrozone" and Glycozone" by express, charges prepaid.

Hydrozone is put up only in extra small, small, medium, and large size bottles, bearing a red label, white letters, gold and blue border with my signature.

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Marchand's Eye Balsam cures all inflammatory and contagious diseases of the eyes.

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☞ Mention this Publication.

THE Cleveland Medical Gazette

AUGUST, 1898.

Original Articles.

SOME CASES OF CRANIECTOMY FOR TRAUMATIC PSYCHOSES.*

BY L. B. TUCKERMAN, M. D.

CASE I.—A gentleman aged 48, an exemplary husband and father and a man of excellent reputation in the community for integrity and sobriety, was kicked upon the forehead by a mule. There was produced a depression of the frontal bone in the median line just at the margin of the hairy scalp. The man was unconscious but a few moments, exhibited no symptoms of cerebral compression, and in a short time was able to be about his business. It soon became apparent, however, that his character was totally changed. He deserted his wife and sought the companionship of prostitutes. He became abusive to his children when at home, so that they would flee from him in terror. Hitherto a strict abstainer from the use of intoxicating liquors, he developed such a taste for whiskey and became so addicted to its use that he wasted his property and became a drunken sot, profane, vulgar, obscene, lost to all sense of decency and manhood. This condition, interrupted by occasional promises of and feeble attempts at "reform," continued for over three

* Read before the Medico-Legal Section of the Cuyahoga County Medical Society, March 17, 1898.

years. Finally, after a long debauch, suicidal and homicidal impulses became prominent, and the relatives consented to operation. Upon removing the depressed bone a large fragment of the vitreous plate was found projecting through the dura for an inch or more into the frontal lobes. The superior longitudinal sinus was crushed and filled with organized blood-clot, and the middle frontal convolutions showed signs of pressure but not of decided degeneration. The operation was followed by but little shock and no inflammation. Constant restlessness was succeeded by marked quietness. The countenance became more serene, the voice less coarse. As convalescence progressed, he greeted his wife and children pleasantly instead of with scowls and curses as heretofore, and as recovery went on it was evident that he had become his old self again, gentle, affectionate, trustworthy, remaining so when last observed—two years after the operation. (This case was operated by Dr. Emory Lanphear, of St. Louis.¹)

CASE II.—In June, 1880, a tanner, æt. 28, sustained a fracture of the occipital bone through a sabre stroke, and ever thereafter suffered severe headaches and occasional attacks of dizziness. In August, 1890, without apparent cause the sight of the right eye became impaired, and notwithstanding the best efforts of specialists to save it, became entirely lost. In May, 1896, the left eye "began to act" as did the right six years before. An oculist reported an impaired condition of the retina, but without assigning any cause. The patient suspected that the old head injury might have some causative relation to his eye trouble, and consented to a craniectomy. A circular section of bone two inches in diameter was removed from the site of the old injury, and upon its removal the dura and brain rapidly bulged into the opening. The removed bone was replaced and allowed to lie loosely on the dura, without any attempt to force it down to its old position. Recovery was uneventful, and was followed by complete recovery of vision in the left eye.

¹ *Am. Jour. Surg. and Gynecology*, Aug., '97, p. 26.

(This case was operated by Dr. Earle, of Milwaukee.)²

CASE III.—A young man of 20, of healthy parentage, with no hereditary taint so far as discoverable, was brought before Judge White, last September, for commitment to the asylum. Judge White asked me to examine him. Ten years ago, while playing on some rocks he had fallen, striking the right frontal prominence, inflicting a scalp-wound one and a half inches long, laying bare the skull and producing a depression therein. He was insensible for three days, and was unable to leave the hospital for a month. After his return home no difference was noted except that he seemed to be more active mentally than before. About two years later, however, he began to grow dull at school, showing more and more inability to get his lessons, finally coming to a complete mental stand-still. He went to school till he was 17 but could not get any further than the fourth reader. In spite of increasing mental hebetude, he has always been manageable till a year ago, when he began to develop periodical excitement. These paroxysms had become worse till his violence became so great as to necessitate his arrest, at which time they were occurring almost daily. The patient's reflexes were normal, pupils dilated but responsive to light and accommodation, speech slow and hesitating; gait slow and somewhat unsteady. No history of masturbation. Has suicidal impulse. At the site of the injury is a scar, tender on pressure, but no marked depression of the bone itself. I advised operation, and on September 21st, Dr. Crile, at Cleveland General Hospital, removed an oval section of skull $2 \times 1\frac{3}{4}$ inches from beneath the scar. The scar was adherent to the outer table. The bone was indurated and considerably thickened. The dura was firmly adherent to the inner table along the line of the old fracture. After the operation the patient became perfectly tractable, made a prompt recovery and has showed no violent or melancholic symptoms since.

CASE IV.—A woman of 64, always in fair health up

² *Internat. Jour. Surgery*, Nov. '97. p. 319.

to the time of the accident, fell on the ice in January, a year ago, fracturing her left elbow and bruising her left hip and the left side of her face very severely. She did not become unconscious after the fall, but had febrile symptoms—headache, thirst, sweating—and was unable to walk for a couple of weeks. The chief attention was paid to the injury of the elbow by the physician in charge, and with but poor result. The break was a bad break—a typically medico-legal break; one of just that kind of breaks so fertile of malpractice suits—and the joint remained stiff and sore, *secundum artem*; and with the shadow of that break and its possible results haunting him, and with no marked cerebral symptoms immediately manifest, it is little wonder that the more important lesion should have at the time escaped the attention of the medical attendant. But as she recovered from the injury of the leg and hip and began to get about again, her children noticed that she seemed to have lost her old cheerfulness and had become inclined to melancholy. They naturally attributed this, at first, to her worry about her injured elbow, but as the melancholy increased, and as one of her sisters had before developed insanity during the menopause, and one son likewise after a severe attack of “grip,” her friends became much concerned about her condition. Hoping that it might benefit her health, she was sent to visit a daughter in another city. She there began to have dizzy spells, and to develop religious delusions, paroxysms of agonizing prayer, and delusions of the unpardonable sin. It was after her son-in-law had brought her back to this city that she first fell under my observation. Examination of the cranium showed a tender, raised ridge above and a little to the front of the right temple. Alongside the ridge was a depression. In spite of sedatives to control her sleeplessness, she became more violent, threatening suicide and attempting violence on others. The alternative of craniectomy or immediate committal to the asylum was presented to the relatives. They chose the first, and on September 25th, at St. Alexis Hospital, I removed an oval section of skull $2 \times 2\frac{1}{2}$

inches, including the depression. The periosteum was abnormally adherent to the line of depression. The dura was not adherent to the inner table, but upward and backward from the depression the bone was abnormally thick and hard. It may be noted here that thickening of the skull, even to producing compression of the brain substance, now and then follows contusions of the cranium, even when there are no demonstrable external lesions of the bone or scalp. As Prescott Hewitt says, "A simple blow on the head, with or without a scalp wound, may sooner or later lead to mischief about the bones of the calvaria. Sometimes the diseased action thus set up ends in hypertrophy of the bones; this may go on for years, and the calvaria thus become enormously thickened."³ At the time of operation the patient was suffering from a slight attack of pneumonia, resulting from exposure during a paroxysm the day previous to the operation. With the relief of the pressure the patient became again tractable and much improved mentally. In spite of the pneumonia, she recovered promptly from the operation. She is not yet wholly free from delusions, but such as still persist are of a milder and much less distressing character, and she has been so far amenable to home treatment and reasonably self-controlled. In this case we can hardly consider the psychic symptoms as wholly due to the misfortune of the accident. The tendency to organic change in the brain tissue was manifestly present, the trauma serving as an occasion of hastening its development. While the craniectomy could and did remove the continued irritation of the pressure, it could not and did not restore what had already undergone degenerative change. But the respite given, even if it prove but temporary, is of the greatest satisfaction to both the patient and her friends.

CASE V.—This case was somewhat of a *cause célèbre* locally. A man whom hardly any of us had ever heard of sprang into sudden notoriety by being placed under arrest for presenting a check for \$75,000 at a small sav-

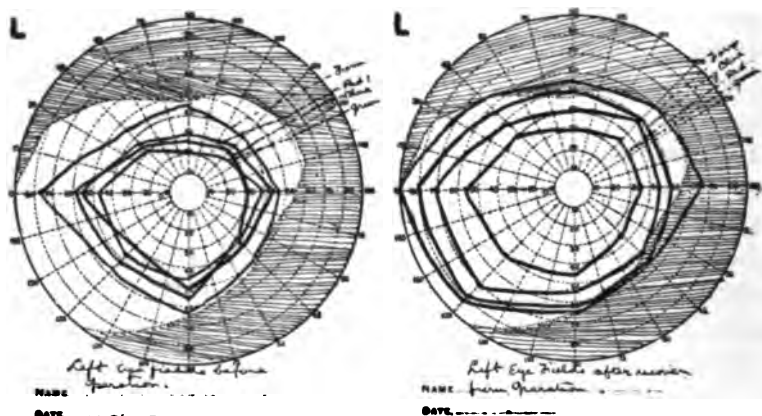
³ *Holmes System of Surgery*, II., p. 248.

ings bank, purporting to be signed by a well-known lawyer, who at once pronounced the signature a forgery. The man made no effort to get away; he simply stayed in his office and awaited arrest. He had a plausible explanation for the possession of the check. He had been in a wheat-deal with "Old Hutch." in Chicago. He had had some \$160,000 of "Old Hutch's" paper. He had given the matter to this lawyer to settle up for him. Settlement had been effected for \$80,000. The lawyer had kept a reasonable fee, \$5,000, and had mailed him a check for the balance. He could see no reason for this denial of signature and arrest, except that the lawyer saw a good chance to keep his fingers on the other \$75,000. This statement on the part of the accused did not act as an emollient to the feelings of the law firm implicated, or in mitigation of the asperity of the prosecution. Inquiry into his history showed that he was about 43 years of age; neither parent living. As a child he had received a severe blow on the crown resulting in insensibility, and leaving a fine linear scar two inches long almost in the median line, running from the edge of the hairy scalp backward. In the median line at the anterior end of the scar is a small round depression the size of the ball of a finger. A year or so later he had been thrown from a horse, also producing insensibility. These facts were learned from an elder sister and from the woman who brought him up after his parents died. He had graduated at high-school and at a State normal school, and taught in academies till 1880, when he was admitted to the bar. As a teacher he was well liked, as a lawyer he seemed ambitious to build up a clientele by faithful attention to business, and had acquired the confidence of the community where he was living. In 1882, he had a severe illness, brain fever followed by acute articular rheumatism, and was advised by his physician to go West. He went in the spring of 1883. These statements are corroborated by an old pupil of his who is now in business in this city. In July of 1883, riding out alone, he was again thrown, was knocked senseless, and picked

up wandering about in a dazed condition two days afterwards by a party sent out to hunt him up. He subsequently contracted chancre, for which he was treated, but with no serious constitutional sequelæ. By 1885, he had secured a school again. He noticed that he could not stand as he formerly could; that, contrary to his wont, he had to sit down a good deal of the time while teaching. About this time he began to be troubled with headaches, beginning as an intermittent piercing pain, stabbing under the frontal promontories, increasing till the whole head would ache with a pressing pain. He was dizzy at such times, and could not use his mind at this time; also, he discovered that his left leg was weaker, and that he could not turn on his left heel. For some years he has been unable to use the left eye, owing to a defect in vision incorrigible by glasses. His head troubles have been worse for the last year. For these statements I was dependent upon the patient himself. An employe of his who worked for him a considerable time confirms these statements in part. He had noticed that the patient was easily overcome by heat, complained frequently of headache, and that his memory was defective. He had also noticed the peculiarity of the patient's gait. In 1887, he returned to his native State and resumed the practice of law in a large town, where he represented a well-known life insurance company. He worked hard and had a good deal of trouble with his head and his left leg and foot. This latter disability caused him to slip and strain that ankle severely. These are his statements. His friends noticed that after his return he seemed changed so much as to occasion no little comment. He seemed to have become visionary and to have his head full of schemes of the Col. Sellers type. He presented at a bank there a check for \$75,000, of which he drew part and assigned part. Later it was found that the check was forged; but far from making any sensible effort at escape with what he had obtained, he went openly to New York City in a Pullman car, with the money in bags on the seat with him, and was arrested in Jersey City.

He pleaded guilty, but his old pupils, acquaintances and friends then regarded his act as that of a man not responsible. Pardoned at the end of three years, he went to Chicago, whence he came here in 1894, engaging in collecting and in electric light business.

Physical examination revealed a depression at the back of the head, at the junction of the sagittal and lambdoidal sutures. It was the angle of the right parietal bone, which overlies the upper portion of the visual centre and the lower portion of the lower leg center for the left side. A physician of prominence where he had resided, and who had attended the accused, asserted from positive



knowledge that that depression was not there prior to 1883. He had examined the patient's skull repeatedly for "bumps" when they were young men together, discussing "phrenology." Reflexes were less and pain sensation was less acute on left side. Left side of tongue was somewhat atrophied. Left leg and ankle were weaker than right. Left pupil was dilated and vision of left eye was about $\frac{1}{4}$ normal and unimproved by glasses. The vision of the right eye was also defective, but much improved by glasses. In the left eye the form field was much contracted; color fields were also contracted, but less so than form fields. There was a slight difference in the pigmentation about the disks of the optic nerve, but

no evidence of active disease. Regarding his physical lesions as connected with the depression of the angle of the parietal bone on April 10th, I performed a craniectomy, removing an oval piece of bone $1\frac{7}{8} \times 1\frac{1}{4}$ inches. The skull was abnormally thickened and the dura abnormally adherent beneath the depression. As there was no evidence of abnormality beneath the dura, the membrane was not opened. As the patient recovered from the immediate effect of the operation it was evident that he was mentally more alert than formerly. His headaches ceased to be distressing, the vision in his left eye rapidly improved—greatly in distinctness and nearly to normal in form and color fields. His control of the left leg was more perfect and its reflexes more nearly normal.

This was one of the cases where "doctors disagree." The physician who treated him, the banker to whom he presented the check, his old pupil, and a business partner regarded him as mentally aberrant and irresponsible. Another partner, and the medical witness who acted in the double capacity of witness and assistant prosecutor, were as strongly of the opinion that he was simply an ordinary criminal. The various experts inclined, some to one opinion and some to another. The jury found him sane and guilty, but the lightness of the sentence imposed showed that in the judge's mind there obtained grave doubts as to the sanity of the accused. Whether he were mentally aberrant and the victim of delusions, or whether not, we cannot settle, but the case is of interest, like Case II., in showing that raising a depression of the skull in the occipital region may be followed by relief of a long-standing defect in vision, sensation and motion, and of a persistent headache of traumatic origin.

These cases are not many, but they are types of hundreds recorded and unrecorded, operated and unoperated. Surgically, they emphasize and confirm Agnew's rule that "every depressed fracture of the skull should be operated on regardless of the amount of depression and irrespective of pressure symptoms," for nearly 50 per cent. of serious injuries to the frontal region, when not

trephined, terminate in epilepsy or insanity, or both. It seems to me that we should go even further. In cases of contusion of the skull where there is no depression, but where pressure symptoms supervene, we should trephine for drainage and for the removal of clot, if such be found. And it would seem, further, that surgical science has progressed far enough, that it has recorded authentic cases enough to modify juridical procedure in this class of unfortunates. The prisoner is entitled to the benefit of any doubt as to whether he committed the criminal act; why not allow him the same benefit of doubt when it is a question whether he were sane when he did commit the act, especially when the history of cranial traumatism is clear? Where cases like Case III. are brought before a probate judge on inquest of insanity, or like Case V. before the common pleas court or trial for crime, why not remand them to a hospital for operation and give them another chance before branding them as insane or criminal? In skilled hands—that is, clean hands—the operation is not a dangerous one. The mortality can hardly exceed 2 per cent., if it reach that high. The patient and his friends would gladly choose that risk as against the certainty of disgrace or incarceration. Why not grant them the choice?

CRITICISMS ON SEWAGE-DISPOSAL. *

BY JOHN G. SPENZER, M. D., CLEVELAND, OHIO.

Professor of Chemistry and Pharmacology, Cleveland College of Physicians and Surgeons.

The importance of the careful removal of waste products of an animal origin, such as excrementary matters and offal, has been recognized by man from the earliest times.

That the ancient Jews enacted and abided by excellent and stringent laws regarding the disposal of human

* Read before the Cleveland Chemical Society, March 30, 1896.

Principal author consulted, W. Santo Crimp "Sewage Disposal Works," London, 1894.

filth, we have every reason to believe. The Greeks and Romans respected regulations against the deposit of animal remains into or near a body of running water. With these wise and strenuous laws and restrictions was given birth a study which has developed into the massive and solid structure of modern sanitary science or hygiene.

The influence upon the health of a community by the improper disposal of sewage on the one hand, and by the sanitary conservation of refuse matters on the other, is well known to be of the most pernicious nature. That there exists a connection between certain zymotic diseases — cholera, typhoid fever, etc. — and polluted water-supplies, has been definitely proven. Water-supplies taken from rivers and lakes may be polluted by the discharge into them of sewage; those abstracted from the earth by means of wells may be tainted by the leakage into them from cesspools, privies and defective sewers.

The greatest progress in sewage-disposal has been made in the last ten or twenty years. To the English under Queen Victoria is to be ascribed the first great modern impulse to the handling of the subject, all recent improvements being along lines mapped out by them.

Prior to 1839, the sanitary condition of the people of Great Britain, like that of other European countries, was deplorable in the extreme. In 1839–40, the "Poor Law Commissioners" in their investigations of the general question of the health of towns, found that the diseases principally prevailing among the working classes were those due to accumulations of decomposing refuse, to damp, close and overcrowded dwellings, and to improper water-supplies. To remedy this state of affairs they advocated the immediate removal of all decomposing refuse, and proposed as an adjunct to better water-supply the construction of sewers to cheaply transport the foul materials to a distance from the towns, to be there applied to land, in order to prevent the pollution of rivers, and to utilize the valuable fertilizing matters which they knew would be present in the sewage. This is the first place in modern times, I believe, where sewers are advocated

and the establishment of the now favorite methods of broad irrigation and sewage farms for the disposal of their contents.

The "Nuisance Removal Act" of 1846, "Public Health Acts" of 1846 and 1875, and the "Rivers Pollution Act" of 1876, soon followed and placed Great Britain in an enviable position in sanitary affairs among the European powers, and its excellent example was soon followed by the latter.

SEWAGE.

Sewage is a very complex liquid. A large proportion of its most offensive matters is, of course, human excrement discharged from water-closets and privies, but mixed with this there is the waste-water from kitchens, containing vegetable, animal and other refuse, together with soap, grease, etc.

To this should be added the drainage from stables, stock-yards and slaughter houses. In fact, sewage cannot be looked upon as composed solely of human excrement diluted with water, but as water polluted with a great variety of matters, of which some are held in suspension and others in solution.

There is a dispute as to what is really to be understood under the name of sewage. Some contend that "manufacturing refuse" and "street drainage," because they are influential in polluting rivers and other bodies of water (even should they not be let into the general sewage system), are to be included.

Under "manufacturing refuse" may be mentioned: Pollution by dye, print and bleach works; chemical works, tanneries, paper-making, woolen works, silk works, oil refineries, etc.

Street drainage in towns with considerable vehicular traffic may be as impure or even more so than ordinary sewage.

It can be clearly seen that if all substances thus far enumerated be considered as sewage that the composition of such sewage will vary within great limits, for it changes from day to day and from hour to hour.

The sanitary engineer makes a distinction between "sewage works" and "sewage disposal works," the first applying to the sewers and contingent works necessary for the collection and removal of sewage. The term "sewage disposal works" applies to the land, filter, tanks and other works necessary for the "treatment and purification" of sewage.

For the purpose of efficient legislation to convict reckless or careless corporations or manufacturers, and to protect the latter from incessant and uncertain litigation, a definition of polluting liquids must be adopted.

METHODS OF SEWAGE-DISPOSAL.

Probably the only proposition of universal acceptance is that crude sewage cannot be disposed of anywhere, by any means, without nuisance or risk of nuisance.

The "pail system," emanating from the old midden and cesspool systems, is a vast improvement on the latter, possessing manifold advantages in regard to health and cleanliness, whilst its results in economy and facility of utilization often compare favorably with the water-carried sewage. However, the habit of mixing ashes with the contents of the pail, while it acts as an excellent absorbent and possible deodorant, is injurious if it is to be used as a manure. For use within the house, it does not compare with the water closet. Middens and cesspools in towns should be abolished, but privies are allowable in even large cities or suburbs of the same. One drawback with the "pail system" is that at least one-third and oftentimes one-half of the excreta of a town escapes, while surface drainage, slaughter house refuse, etc., are not accounted for. The "pail system" has been largely used in England, it being most fully developed at Rochdale. The pails are made from petroleum barrels cut in two, and then restaved and rehooped. When finished they are 18 inches at the top, 15 inches at the bottom, cost 95 cents apiece, and last two years. According to Mr. Platt, Borough Engineer of Rochdale, the disposal,

i. e., manufacture of excreta into a concentrated manure, and the disposal of ashes, etc., just covers expenses. At Halifax the pails are used with absorbent lining of dry refuse on the Goux principal.

SEPARATION OF STORM-WATER FROM THE SEWAGE PROPER.

This is a difficult problem to solve, both theoretically and practically. Where sewage is treated chemically or filtered it would be advisable to have the separate systems. However, the object may often be quite satisfactorily attained by one system only provided with proper storm-overflows, as is the case in London, Paris, etc., the former place allowing it untreated to flow into the Thames, it having been found absolutely impossible, in spite of the immense pumping facilities at Crossness, to take care of it. At Paris, in case of a severe storm, the large number of voluminous playing fountains are shut off, otherwise its massive sewage system is unable to accommodate the sudden demands on its great capacity.

At Berlin, thanks to the good forethought, six times the number of pumps usually necessary for ordinary purposes are at hand, so that they experience no difficulty in accommodating the most extensive rain-falls known in those parts. It is the only city which has such excellent arrangements as far as I know. Of the separate systems there are those of "Waring" and "Shone." The former, built on English principles, was introduced in Memphis after the epidemic of yellow fever in 1880. The Shone system has been operated very successfully since 1880 at Southampton, Eastbourne, Darlestone, etc., in England.

The opinion expressed by the Congress of Hygiene of Paris, in 1889, that a double system of canalization is complicated, inefficient, costly and difficult of arrangement, and only to be recommended in exceptional cases, seems to be gaining ground on the Continent; although, at the Congress held in Vienna it had a most ardent advocate in M. Durand-Claye. Many cities, both in this country and abroad, have demonstrated that if no useless pro-

duction of sewage is occasioned, that an additional sewer is unnecessary.

COMPOSITION AND VALUE OF SEWAGE.

According to Roederer, Eichhorn, Letheby, Tidy and others, the liquid and solid excreta of human beings amounts to two and one-half pounds per head per diem, one-twelfth of which is fecal matter; 260 grains are insoluble in water. On an average, the suspended matter in a gallon of sewage contains about 7 grains of fecal matter.

LONDON SEWAGE.

CONSTITUENTS PER TON.	AMMONIA.	PHOSPHORIC ACID.		POTASSA.
	Per lb. 15 cents.	Sol. 10 c.	Insol. 5 c. p. lb.	Per lb. 8 cents.
Natural State:				
Urine	23.94	2.94		3.39
Feces	35.45		26.62	9.46
Mixed Excreta of Population	23.13	2.70	1.93	3.83
1,000 tons of London Sewage, average.....	219.37	27.61	24.20	50.65

The annual value of the excreta of an adult person has been variously estimated by different authorities at from two to five dollars. (Laws, Way, Voelcker, Hoffmann, Witt and Thudicum.)

Compared with other manure :

1 lb. of human excrement = 13 lbs. of horse dung.

1 lb. of human excrement = 6 lbs. of cow dung.
(Macaire, Marcet.)

Excreta, solid and liquid, of an adult is equivalent to the drippings of one sheep. (Mechi.)

The yearly excreta of one adult is equivalent to 75 lbs. of Peruvian guana. (Voelcker.)

PURIFICATION OF SEWAGE.

Sewage may be purified:

- (a) Mechanical settling, or sedimentation.
(b) Chemical settling, or precipitation.
- (a) By electrolysis, " Webster process."
(b) By electrolysis, " Hermite process."
- By filtration.

4. By broad irrigation, or sewage farms.
5. By dilution.

According to the results obtained by Lepsius at the Frankfort-on-the-Main settling tanks, 90 per cent. of the suspended organic and inorganic matter can be removed, but the micro-organisms are not diminished.

1. (*b*) Through the addition of chemicals the dissolved organic matter is rendered insoluble, carrying down the suspended particles with insoluble compound produced. It is more speedy than mechanical precipitation. The most important feature of a chemical clarifying agent is its disinfecting power, and on this property is its value to be placed.

The principle chemical precipitants used are lime, aluminum sulphate, soluble silicates, and ferrous sulphate. These are used alone or in a variety of combinations with each other or other compounds, as magnesium compounds, manganous chlorid, iron chlorid, hydrated oxid of iron, aluminum hydrate, zinc chlorid, alum, phosphates, gypsum, coal dust, soda, water-glass, sodium sulphate, tannin, and even blood.

Of all the processes, those of chemical precipitation are the most numerous. The first patent was taken out in 1762, by Deboissieu, and up to the present time there are some 500.

Dupré says: " Since no proportion of chemicals which can be practically added will do more than clarify the sewage, the amount used should be kept as low as is consistent with the object to be attained; namely, and that, more particularly, the use of large quantities of lime should be avoided." This statement is not borne out by other authorities. Of this I will speak later.

Lime, alone or in combination with other chemicals, is mostly used. The amount of lime necessary varies; it is usually slaked the day before it is used. It is added as milk of lime, the quantity employed being previously determined, and is adjusted by regulating the flow of sewage. In London, they run the sewage into the lime water, its force being sufficient to agitate and thoroughly

mix it; oftentimes, where the sewage is pumped, the mixing may be done in the pump well. Tidy recommends not less than 10 grains per gallon to a sewage of not more than 30 gallons per head. Dibdin uses, in treating London sewage, 3.7 grains of lime per gallon in the form of milk of lime.

In Germany, up to the present, only lime "Wiesbaden;" lime and aluminum sulphate containing silica "Frankfort" and "Dortmund;" lime and aluminum sulphate with a soluble silicate "Halle" are used. Lime added as milk of lime forms carbonate, phosphate, sulphid, insoluble lime soaps whereby the organic matter in combination with the fatty acids are precipitated.

Aluminum sulphate unites with the ammonia and the other alkalies form soluble salts; the organic matters held in solution by the alkalies, aluminum hydrate separates as a flocculent precipitate. If lime be used in the process, gypsum is formed and carries the lighter particles down with it, acting simply as a mechanical clarifier.

Soluble silicates, "Nahnsen's patent," forms simple and double silicate with lime and alumina; in this case it acts as a mechanical clarifier principally.

Iron sulphate works somewhat analogous to aluminum sulphate, while it also possesses oxidizing properties.

The use of lime has certain drawbacks. The ammonia contained in the sewage is set free, giving off a strong odor, and if it remains dissolved in the effluent it, like the use of an excess of lime, forms soluble compounds with the organic matter, so that at times the effluent contains more dissolved organic and fermentative material than before the treatment.

100Kg. of lime produce 178Kg. of Calcium carbonate.

100Kg. of aluminum sulphate produce only 21.4 Kg. of alum. hydrate.

100Kg. of ferrous sulphate produce only 40.1 Kg. of iron hydrate.

Aluminum sulphate has the advantage that it combines with the ammonia, forming an odorless soluble salt

and the voluminous precipitate of aluminum hydrate serves as an excellent clarifier.

The object aimed at and accomplished by the use of lime, when well done, is the precipitation of 90 per cent. of suspended matter; 70 to 90 per cent. of bacteria are removed, and it is supposed that the less hardy pathogenic are destroyed. The soluble substances, such as ammonia, potassa, etc., remain unaltered, phosphoric acid is almost wholly precipitated. The organic matter is as a rule not diminished, but at times is increased. The odor is usually improved and fermentation does not set in while there is an excess of lime present in the effluent.

From a hygienic standpoint, chemical precipitation cannot be looked upon as entirely satisfactory. But it must be acknowledged that the removal of almost all of the suspended matter, together with a large part of the micro-organisms, is a considerable betterment in the sewage, so that the danger from turning it into a body of water is considerably diminished.

Lime and Chlorinated Lime:

Used in the weak sewage at Hertford, England. Tidy has found one-third of a grain of chlorinated lime per gallon sufficient to prevent sewage fungus. Fifty-six pounds per 1,000,000 gallons of 30 gallons per head is sufficient.

Hillé's process is a paste composed of lime, 100; gas tar, 3; chlorid of magnesium, 17; water, 180. The amount to be used varies from one-fourth to one pound per 100 gallons. It was used at Wimbledon, 1870-76, and Edmonton; was, however, superseded in the first case by lime and in the latter by land.

Lime and Aluminum Sulphate:

The sewage made alkaline by means of lime 5 to 7 grains per gallon, allowed to flow a few yards, when a solution of crude aluminum sulphate is added. It was supposed that the aluminum sulphate removed some organic matter which had escaped the iron.

Dibdin, however, claims that, as in the case of the

iron salts in the treatment of London sewage, the amount of organic matter removed by aluminum sulphate is not materially greater than that attained by lime alone.

Lime and Phosphoric Acid:

This was patented by Mr. Forbes and Dr. Price. They make an acid solution of a native phosphate of aluminum procured from the West Indies, consisting of phosphoric acid, 38; alumina, 25, and peroxid of iron, 2.5 per cent. If no lime be used, then soluble phosphates remain in solution, which enhances the value of the sewage when used for irrigation.

Lime and Copperas:

This is used at London, and Dibdin recommends 3.7 grains of lime and 1 grain of copperas per gallon of sewage. In summer they find it necessary to use permanganic acid, in the proportion of 1 to 10 grains of manganate of soda and of a grain of sulphuric acid per gallon. In 1877, 2,173 tons of sodium manganate and 865 tons of sulphuric acid were used.

Lime and Black Ash Waste:

Was used in Wimbledon, Leyton and Tottenham. In sufficient quantity, black ash waste seems to prevent the formation of putrefactive organisms, but does not destroy those existing, which set up putrefaction without producing gaseous products.

A. B. C. Process:

The ingredients vary from time to time. It is usually a mixture of alum, charcoal, or refuse from prussiate of potassa works and clay. Blood was at one time used, but has not been found necessary. The clay and charcoal are first ground in a mortar-mill, with water, and allowed to flow into the sewage. The alum is dissolved in water and then added. Here, now, are two imperfect processes: (1) Aluminum sulphate, which clarifies but does not disinfect, and (2) Clay and charcoal, which deodorize but do not clarify, and which, as a consequence, remained floating in the liquid with their impurities. But, put these together and you have the sensational "A. B. C. Process." Mr. Sillar, the patentee, first gave the following

formula: Alum, 600; blood, 1; clay, 1,900; magnesia, 5; manganate of potassa, 10; burnt clay, 25; sodium chlorid, 10; animal charcoal, 15; vegetable charcoal, 20; magnesian limestone, 2. Amount used, 28 grains per gallon.

Tidy found this to vary from 28 grains, at Leicester in 1868, to 224 grains at Crossness in 1873. It produces a large amount of sludge, but this when dried is an excellent manure, worth \$19 a ton. It has been used in a number of places, but not continued. Is used at Aylesbury, 12 years, Wellington College, Kingston-on-the-Thames, 1888.

Ferozone and Polarite:

Consists in using ferozone to precipitate with, the filtrate being passed through a filter of polarite.

Ferozone consists, according to Roscoe, of:

Ferrous sulphate, 26.64; aluminum sulphate, 2.19; calcium sulphate, 3.30; magnesium sulphate, 5.17; moisture, 32.34; silica, 11.35; oxide of iron, 19.01.

Polarite consists of:

Oxid of iron, 53.85; alumina, 5.68; magnesia, 7.55; water, 5.41; silica, 25.50; lime, 2.01; carbon, traces.

The ferruginous effluent from the tanks is passed through a sand and polarite filter. It filters sewage effluents at the rate of 1,000 gallons per square yard per diem, with better results than can be obtained by land, which filters at the rate of about one and a half gallons for the same time. In other words, one acre of filtering area containing a layer of polarite will do more efficient work than 666 acres of land.

Spencer's System:

Is the same as the preceding, only that instead of polarite a compound of carbon and magnetic oxid of iron is used. It is recommended by Wardle, who says that the albuminoid ammonia from 0.14 parts per 100,000 is reduced to 0.065 parts. Is used with remarkable success in filtering the River Calder for domestic purposes since 1864, and has been used for purifying the sewage at Salford.

Amine Process:

Wollheim, who proposed this method, claimed that a complete sterilization of the effluent results. In this he is corroborated by Klein. From 30 to 50 grains of lime and 3 grains of herring brine are used, a very rapid clarification takes place, and the resulting sludge is almost odorless.

Wardle's Process:

Persulphate of iron, a basic ferric sulphate, very unstable, combining with the organic matter decomposing itself. It was proposed by Mr. Wardle, a manufacturer and silk dyer of Leek, England. It is a liquid, and has been found to operate better when used with milk of lime. It does not produce much sludge, and has been successfully used at Salford, England, in doses of 4 to 8 grains per gallon.

Massachusetts State Board of Health Experiments, Lawrence. Organic matter removed by different chemicals:

With lime, costing 30 cents per head per annum, 22 per cent.

With lime and copperas, costing as before, per annum, 29 per cent.

With ferrous sulphate, costing as before, per annum, 32 per cent.

With aluminum sulphate, costing as before, per annum, 20 per cent.

With ferric sulphate, costing 40 cents per annum, 41 per cent.

With aluminum, costing 40 cents per annum, 29 per cent.

The results show that the lime process has little to recommend it, and that it must be slowly superintended. The organic matter was estimated as albuminoid ammonia.

The whole object in treating sewage chemically is to precipitate and clarify it while fresh ("Tidy"), i. e., before bacterial invasion has so far set in as to occasion

active fermentation. When this has once begun it is very disappointing.

Oxidation of Organic Matter:

It has been conclusively proven that aeration of sewage only causes a very slow oxidation, if none or but small quantities of bacteria are present. It has been with as much certainty demonstrated that, with a sufficiency of aerobic micro-organisms capable of oxidizing organic matter, this oxidization goes on very rapidly. Infusoria have been found to have a detrimental effect on bacteria, for if infusoria be present the bacteria diminish in numbers. Infusoria and bacteria seem to be antagonistic to each other. Harvey Attfield, in a paper in the *British Medical Journal*, June 17, 1893, says that a water containing 3,000,000 bacteria per c.c. diminished in number to a little over 13,000 in 10 days, while water containing no infusoria but 700 bacteria per c.c. increased their number to 121,500 in the same time.

M. Raulin has found in the cultivation of aspergillus, a specie of mildew, that it is quite essential that these low forms of plant life be furnished with proper food. An artificial medium, containing among other things zinc, caused, when the zinc was omitted, although it represented but 1-50,000 part of the mixture, a falling off to 1-10 in the crop.

The plant is so sensitive to the action of reagents that the addition of 1-1,600,000 of a part of silver nitrate caused the vegetation to suddenly stop. The ideal chemical treatment would be one in which the putrefactive germs would be destroyed, leaving the fermentative bacteria to finish the destruction of the organic matter. A method for the complete destruction of all pathogenic bacteria under all conditions can only be attained by the complete disinfection of the sewage. This must be acknowledged to be still an unsolved problem in chemical precipitation.

The excess of lime in the effluent can be removed by aeration, by allowing it to flow down a step-like arrangement, or by the passage of factory gas through it. Dr.

Ostermann, of Wiesbaden, has recently applied for a patent in Germany for the removal of the excess of lime by the latter method. He burns the sludge after having pressed it, thereby recovering the lime; the ammonia he overcomes through the use of sulphurous acid. This method is well thought of by Chief Engineer Brix, of Wiesbaden.

DISPOSAL OF SEWAGE-SLUDGE.

The settling tank sludge may be disposed of in several ways. Of all the methods used, however, the idea of separating the solids from the liquids seems to be the principle in view, and this in the shortest time possible, in order, first, to reduce the bulk and, second, to abridge the time necessary for the production of the foul gases of putrefaction.

Dr. Munro believes properly dried and powdered sewage sludge has a greater manurial value than farm-yard manure. This is, however, very doubtful. The best authorities are of much the same opinion that as a manure it has a low and uncertain value, contains 90 per cent. of water, and in a cubic metre but 1 Kg. of N, little more of phosphoric acid and very little potassa.

The cost of converting it into a valuable manure will preclude the attainment of any adequate return on the outlay, and working expenses connected therewith, and means must therefore be used for getting rid of it without reference to possible profit. At London it can be had for the asking.

To remove the larger amount of water from the sludge, filter beds and filter presses are used. The former is, however, a great nuisance and has not found general adoption. Filter presses have been abandoned at London.

As Clinkers:

This was formerly in use at Wimbledon, and is now used at Ealing, where Fryer's Destructor is employed. The sludge is burned to $\frac{1}{4}$ its bulk in the form of a clinker. A special muffled furnace is necessary to destroy the

bad-smelling gases evolved before they are allowed to escape into the chimney.

The drying process in open filters is extremely offensive, especially in hot weather.

As Cement:

Scott's process is one of calcination, and is used in the manufacture of Portland Cement. It was in operation at Brunley, and is used in part at Reims, France. It will probably not meet a general adoption in a community where raw materials are cheap.

Digging into Land:

This method is practiced at Birmingham.

Steamship Carriage to Sea:

This manner of getting rid of sewage sludge has been in operation at Barking and Crossness, the sewage treatment localities of London, for five years; it is also employed at Salford, on the River Mersey. When Mr. Dibdin proposed this in 1887, it was warmly criticised, but was subsequently recommended by the Royal Commission on Metropolitan Sewage, and experience has proven it to be the best method from a sanitary point of view.

The advantage of the means is that the sludge will never be seen. Precipitated in covered reservoirs, transferred from the precipitating tanks, from these pumped into the sludge vessel and discharged under water far from land, the sludge will disappear in the most speedy, cleanly and safe manner that can be devised.

The objections which may be raised to this method are three-fold:

1. Waste of valuable manure.
2. Possibility of nuisance on the coast.
3. Delay in transit by fog or stress of weather.

In answer to the first, it may be said that it may be had for the taking of it. No nuisance has been observed when it has been deposited into the sea. No delay has as yet been occasioned thereby.

Electrolysis, (a) "Webster Process;" (b) "Hermite":
Sewage purification by means of an electric current

was first proposed by Webster. The decomposition is effected by a current of 9 volts and 1 ampère for 10 minutes per gallon. The sewage is first screened. Iron electrodes are used. They are constantly immersed in the liquid, as the coating of oxid which forms protects it from the action of hydrogen sulphid. The electrodes are usually in a series of 25. They are destroyed at the rate of 2 grains per gallon. The organic matter is reduced 61 to 87 per cent. Webster, who has introduced the process on a large scale at Salford, England, gives the following plant as sufficient for 1,000,000 gallons of sewage per 24 hours:

Engine, dynamo and boiler-house; two engines and boilers, each 12 horse-power, nominal; two dynamos, brick shoots with culverts at side, two settling tanks, sludge-tanks, sewage culvert, treated sewage culvert, cast-iron plates, copper conductor, measuring instruments.

The Hermite system was first used at L'Orient, France. It consists in the employment of electrolized sea-water. This agent, when mingled with the sewage, is said to effect complete purification, accompanied by the entire destruction of the microbes.

Electricity in this case is less direct than in the Webster process. The latter has the advantage, therefore, of not requiring sea-water, the operation takes place at once on the sewage without any intervening compound. The process has also been used at Le Havre, France; Ipswich and Worthington, England, and at Brewsters, N. Y.

During my visit to Le Havre, in August, 1895, the city did not present a very cleanly appearance. It is located on the sea-side, is hilly and is comparatively easy to keep clean.

The value of the electric processes is to be ascribed (1) to the oxidizing action of the liberated oxygen, and (2) to the formation of inert or odorless chlorin compounds. It is thought by some to be as yet too expensive for general application.

APPLICATION TO LANDS.

Intermittent Filtration:

When intermittent is the process by which purification is to be effected, the filter is built up, beginning with small boulders; upon this layers of gravel and sand, in all making a filter about six to nine feet deep. The sand used on the surface is usually coarser than that which is selected for drinking water. The lands are laid out with great care; in fact, with quite as much as is displayed in the arrangement of a pure water filter. The levelling and under-drainage requires an amount of attention and care generally underestimated, and can be made a great success or a miserable failure.

A favorite method in England is to clarify the sewage chemically and then filter. Thus, Birmingham disposes of 16,000,000 gallons of sewage per day in this manner. At London they have used filtration after clarification to a limited extent because of the scarcity of lands. The filters should have two to four times the amount of rest as of usage, in order to sufficiently aerate them; otherwise sufficient bacterial life is not developed, and seldom more than 30 per cent. of the dissolved organic matter is removed.

Broad Irrigation, or Sewage Farms:

In the case of broad irrigation, the surface area must be sufficiently large, presenting a gentle slope, in order that the sewage may travel slowly forwards in a lateral direction, and also admit of the drainage and drying of the surface before the application of the sewage. Where the subsoil is of sand, gravel or other porous material a proper and efficient filtration can be obtained. Such is the case at Gennevilliers, near Paris, and at the Berlin and Wimbledon farms.

Clay soils require much careful attention, as their reckless management has led to a state of affairs at the end of the drainage infinitely worse than before the filtration was begun, for the growth of the so-called sewage fungus renders it so, since, as was said above, the very

necessary fermentative bacteria are destroyed, and which are so essential to the excellent water discharged from a well-operated sewage farm. It seems to be the prevailing opinion among friends of intermittent filtration and irrigation that they be at least six feet deep. At the Berlin and Paris farms the surface layer of sand is removed from time to time, washed and replaced again. The time to remove the surface is determined by the daily bacteriologic examination of the drained water.

At Wimbledon the farms are plowed over deep every other year, and prior to being cropped to a distance of nine inches. They are then strewn with sifted ashes and prepared in the ordinary manner. In this way a porous layer of about 12 inches is obtained, which is carefully leveled so as to prevent pounding. The addition of lime to the surface sand from time to time is beneficial to a filter. Deep ploughing and occasional subsoiling is necessary for clayey soils, and if the sewage be carefully and intermittently applied, 20,000 gallons per acre per day, or 40 per head for 500 people, can be purified.

The birthplace of intermittent downward filtration, as applied to sewage purification, was in the laboratory of the Rivers Pollution Commission of England. They used a series of experimental filters constructed of an outer cylinder 6 feet long by 10¼ diameter, open at both ends. Through its center a glass tube likewise opened, and passed to within three inches of the bottom, in order to allow gases to escape, and thus keep up a good uninterrupted filtration. A three-inch layer of pebbles was placed into the bottom of the cylinder, and upon this five feet of soil, which was in turn topped off with one inch of fine sand.

These experiments demonstrated that soils varied in their power of purification.

Barking	Soil purified	38,000	gallons of sewage per day, per acre.
Hambrook	"	44,000	" " " "
Beddington	"	76,800	" " " "
Dursley	"	100,000	" " " "

Here the condition of the soil, physically, seemed to have more effect than the chemical composition.

The Commissioners compared the sewage farm with the lungs of an animal, and the sewage with the blood, in which the air was an oxidizing agent. They believed that to the surface attraction and chemical affinities of some of the ingredients of the soil, through an actual appetite for the impurities in filthy water, must be ascribed the purification occasioned.

MM. Schlesing, Muentz and Durand-Claye studied the purification of sewage, and found that the first process is one of filtration. Antiseptics are detrimental to bacterial growth. It is to be supposed that the refuse from factories would not be conducive to nitrification. On Sewage farms the bacteria and suspended matter can be almost entirely removed and 90 per cent. of the dissolved organic and 60 per cent. of the inorganic substances disposed of.

Berlin Sewage Farms:

The sewage farms of Berlin have attracted widespread attention, mainly in consequence of the large area which has been provided for the purpose of purifying the sewage of that city.

The city of Berlin is divided into two portions by the River Spree. These two areas have, for drainage purposes, been subdivided into twelve separate districts, each with its own pumping station, from which the sewage is pumped onto the northern and southern farms, located six and twelve miles from the city, respectively.

The farms are nine in number, with an area of 19,000 acres. The cost of preparing 11,015 acres was \$474,280. The land cost \$205 an acre, making a total cost of \$365 per acre. The expenses per acre per year are \$28, and the profit is \$5.

The question of the value of sewage farms has often occupied administrative and scientific circles at Berlin, who have with a considerable expense acquired this extensive system. At the last meeting of the Berlin Medical Society, last fall, it was again the subject of much discussion, which again demonstrated its usefulness. The subject was presented by Professor Weyl under the title,

"The Influence of Irrigation Farms on Public Health." His ideas were warmly seconded by Virchow and Auerbach, while Shaefer and Zadek opposed them vigorously. Numerous complaints were made against them, among which were statements (1) that the bad odors given off by them endangered the health of those living in the neighborhood. Weyl opposes this with the simple statement that it is seldom that they are ill-smelling. This is not entirely true, according to my observations. (2) A second charge is that, in the territory occupied by the farms the soil becomes supersaturated with organic matter, which can lead to malarial fever. This can be prevented by having a reliable plant adapted to the geology of the neighborhood and carefully regulated management. An illustration of this is offered by those of Edinburgh, which are 150 years old, as well as those of Danzig and Berlin, where a case of malarial fever has never been known. (3) Is the most weighty, to wit, that irrigation farms cause a spreading of infective diseases, particularly typhoid, in that pathogenic organisms responsible for this trouble are not surely destroyed, so that they escape into the river and occasion an epidemic.

This is contradicted by the observation that, of the laborers on the farm for the last 14 years, only 15 cases of typhoid fever have been noticed.

SEGREGATION OF THE CRIMINAL INSANE.*

H. C. EYMAN, M. D.,

Superintendent State Hospital, Newburg, Cleveland, Ohio.

The consideration of this subject is comparatively new to medico-legal students in Ohio, but has received the attention of the most advanced penologists and sociologists of some of our sister States. New York is the pioneer. She has battled with this question for nearly fifty years, and has done much toward settling a mooted question. In addition to New York, such segregation is

*Read before Medico-Legal Section, Cuyahoga Co. Med. Soc., March 17, 1898.

practiced in Michigan, Massachusetts and Illinois. Pennsylvania is actively agitating the subject, and it has enlisted the sympathy and energy and active co-operation of many of the best men in the State. Great Britain, through Parliament, made careful inquiry into the subject, and as a result of such investigation Broadmoor was established.

In discussing the desirability of caring for the criminal insane in separate institutions, we must divide them into classes.

1. The insane criminal.
2. The criminal insane.
3. The criminal feigning insanity.
4. The insane with criminal proclivities.
5. The lunatic — dangerous because of his delusions — the insane offender.

First, then, we will consider the insane criminal. In this division, for convenience, we will include all those convicted before the insanity became manifest. The germs of the disease may have been present, his criminal act may have been the direct result of disease, though if such were not manifest before conviction he would belong to the class known as insane criminals. You are aware that insanity is prevalent among convicts, indeed it is frequently the direct result of the confinement in prison. In New York, with an average prison population of 4,700 there is an average of 54 committed to the hospital for criminal insane, or about 1 in 87. In that State the ratio of the insane to the sane is about 1 to 450; thus, you see that the statement that confinement in prison is a prolific factor in the causation of insanity is borne out by the real facts. However, it is proper to say, in passing, that a small percentage of these do not belong to the criminal class. By reason of insanity they perpetrated some crimes for which they were improperly tried and convicted. Some of them may have interposed the plea of insanity as a defense and were unsuccessful in establishing the fact, and in others the fact of their insanity does not become evident until after trial and its existence may have

been entirely unsuspected. These, we say, do not properly belong to this class.

If we eliminate all persons, therefore, in whom insanity existed at the time of the criminal act, and before conviction, we shall have remaining the general convict body, made up of men who were sane before commitment to prison; and from this body comes the insane criminal. Many of these are old offenders, and among them the habitual criminal. They are an unstable lot, mentally, and during confinement become deranged. Now, some of my colleagues will call them degenerates. I admit that a condition of mental and physical enfeeblement seemingly congenital in character is often to be found in this class. Some of them have never been bright. Their condition is due both to environment and heredity. They may recover from the insanity which has developed during imprisonment, but it is a serious question whether they should be discharged, as would be necessary if confined in the ordinary hospitals for the insane.

The criminal insane would properly include all insane persons with criminal tendencies, but for convenience we will confine the term to those who were known to be insane at the time of committing the crime. These may be mentally, morally and physically higher in development than the first class. As a rule, such convicts are not disposed to criminal pursuits, but, the crime being the result of disease, may be in the nature of an accidental circumstance. The crime is probably the direct outgrowth of delusions of persecution. It is true, they are dangerous to the community, not through criminal propensities, but rather because of their delusions. They are frequently homicidal. Under the present condition of affairs in Ohio they are frequently given life sentences because of the fear that they might escape from our hospitals, or be discharged by some incompetent superintendent and again become a menace to the community.

The third division, viz., the criminal feigning insanity, while not a large class, yet is important enough to engage a small share of our attention. He may be a real

degenerate, or he may be a genius with sufficient intelligence to make a name for himself among the great were his abilities directed properly.

The genius feigning insanity as a shield from punishment is perhaps the most difficult problem we are called upon to solve. I recall a case of a man arrested for horse stealing in Putnam County, O. Soon after arrest he apparently fell into a state of complete dementia. All efforts to arouse him failed utterly. He would not eat, nor look after his wants in any manner. Finally he was adjudged insane and sent to the Toledo State Hospital. Here it was found necessary to forcibly feed him. He was filthy in his habits, spoke to no one, and to all intents was an absolute dement. Of course, under these conditions, he was placed in the cottage for demented. About the third night afterwards the night watch heard a slight sound, and going to his room discovered an empty bed and an empty room. The bird had flown. He had made a rope out of his bed clothing, removed the screws which fastened the screen by means of a broken case knife fashioned for the purpose, and so stealthily and quietly removed the screen and window that the watch, who was on the same floor, was not alarmed until too late to prevent his escape; for escape he did, and so thoroughly did he disappear that no trace at all was ever discovered. Here was probably an old offender, and if he had been committed to a hospital built for the purpose of custodial care for such as he, the danger of his escape would have been reduced to a minimum. It is also probable that there would be fewer cases of feigned insanity if we had an institution strongly built for their incarceration.

The institutions for the care of the insane are constantly approaching more closely to the purely hospital type, and of course becoming less and less of the prison, consequently it is an easy matter for those so inclined to effect their escape.

The fourth class is quite a large one, and consequently important—the insane with criminal tendencies. There are perhaps large numbers of people in all parts

of our country who feel impelled to commit crime, but who are enabled by sheer strength of will to resist temptation. Their mental make-up is unstable, and frequently the tendency to crime is atavistic. Gradually the strength of will weakens, the mind is deranged and they drift into the asylum for insane.

Here their proclivities for crime is a constant source of annoyance to the authorities. Without provocation or notice they will strike another patient, upset the furniture and oftentimes develop dangerous homicidal tendencies.

Then we have the lunatic, dangerous because of his delusions. His delusions are apt to partake of the nature of ideas of persecution, and after he has recovered, or apparently recovered, it is difficult to determine whether these false beliefs have entirely disappeared or simply become quiescent.

I remember a case at Athens, O. A young man became violently insane, and in the very incipency of the attack attempted to commit murder. With difficulty he was restrained and safely conveyed to the State Hospital. He was watched closely for several days, and gradually improved, or apparently improved. The attendant became less watchful, and came near losing his life in consequence. While sitting with his back to this patient and watching others at work in the dining room, he felt something cold at his throat. Before he could make any outcry or defend himself the patient had made a violent effort to cut his throat, and failed only because of a collar button. The knife, which he had purloined from the dining room (a bread knife), had been drawn across the throat and caught under the collar button, but cut a deep gash at side of button. After a fierce struggle the patient was overpowered.

Now, this patient subsequently recovered and was discharged, only to have another attack and seriously wound the sheriff and two or three deputies who attempted to arrest him. It seems to me such patients should not be confined with the ordinary insane person in the

ordinary hospital. It is probable his ideas of persecution were only quiescent, and that he should never have been discharged; but under the present condition of affairs the superintendent could do nothing else, because at the time of his discharge there was absolutely no evidence of insanity, and a writ of habeas corpus could not have been successfully combated. The individual history should govern largely in determining the present mental condition in cases where there is an element of doubt. But this the courts will not allow as preponderating evidence. If the question of responsibility were oftener raised in the courts and the length of confinement made more dependent upon the character and record of the individual than upon the crime, many of these persons would be sentenced for very much longer terms and others committed to lunatic asylums.

If a man knew his character as well as the act was to be considered, it might have a deterrent influence upon him. The old idea of punishment is passing away, and security of life and property is better effected by methods which look to the reformation of youthful first offenders, the lengthy sequestration of the confirmed criminal and the detention in custody of the insane convict beyond the expiration of his term until he is recovered or considered fit to be at large. The first, the reformation of first offenders, is receiving careful experimentation at the Mansfield reformatory. The second, the lengthy sequestration of the confirmed criminal, is looked after by the cumulative sentence law; the third has not yet received favorable consideration at the hands of Ohio lawmakers. In all States where hospitals for criminal insane have been established, it is the practice to commit to their custody all convicts who become mentally deranged. If they recover before the expiration of the term for which they were sentenced they are returned to the prison to serve the remainder of their terms. If they remain insane they are detained at the hospital beyond the period at which their terms of sentence end, and until they recover or are sufficiently improved to be released with a

reasonable degree of safety. Dr. Allison, of the Hospital for insane criminals at Mattewan, N. Y., publishes the following interesting statistics: The average length of sentence, excluding life sentences and execution, is about three years and ten months. The average duration of time added to the imprisonment by being transferred to the Hospital for insane criminals was about one year and three months. Thus, you see that the insane convict who is so unfortunate as to remain unrecovered at the end of his sentence has an average duration added to the length of his term of about $33\frac{1}{3}$ per cent; and if his delusions are such as to render him unsafe to be at large he is practically confined for life. In this manner some of the criminal elements who are dangerous by reason of insanity are sifted out and remain in custody. When viewed as a result of insanity, acts which have been credited to viciousness awaken the sentiment of pity and sympathy rather than resentment and retribution. Yet, when we consider that our laws are made to protect the innocent from the effect of crime, and not for the criminal, we are led to believe that the subject should be kept within the restraint of a hospital for the insane as long as he is a menace to the community and incapable of self-control.

As a subdivision of the insane criminal we have what might be termed insane offenders. This subdivision comprises a most dangerous class of individuals, who have excited a vast amount of controversy on the subject of responsibility in mental disease. Members of the medical and of the legal profession have written much upon this subject. Upon this rock our fondest hopes are often wrecked. Upon this point the legal and the medical profession will never agree and, saddest of all, medical gentlemen do not always agree. The legal test, "Did the accused know the nature and quality of his act, and did he know that it was wrong?" will not satisfy the medical profession. As a rule, the insane person has a very good knowledge of right and wrong in the abstract; and while in general he may be fully aware of the enormity

of homicide, yet in relation to his act he often holds very erroneous beliefs. Again, a man may for a long time be subjected to the homicidal impulse, and by great effort resist it. Finally the impulse overpowers him, and his one transgression in all its appalling details appears before him.

He makes a full confession and tells the judge how he has successfully striven to combat this impulse for years past, but at last succumbs to the irresistible impulse. The jurist will probably tell you that if a person is capable of curbing himself for some length of time from the commission of an act which he feels to be wrong, that the very fact of such self-restraint implies the exercise of will power and a knowledge of right and wrong, which renders him fully responsible; if he could control his actions for a week or a month, why could he not have finally refrained from doing wrong? Herein the medical gentlemen will differ from the jurist and look for pathological action.

He will tell you that it might with equal truth be said that because a patient ill with a fever was able to walk about for days, his eventual confinement to bed was something which he could have successfully combated. Yet we know that the continuance of disease leads to death, which it is in the power of no man to avert. In the same manner, progressive mental disorder often leads to criminal acts. I have no doubt there are walking the streets of Cleveland to-day men who are insane, and who are resisting homicidal delusions or impulses to do harm. We all know that many persons have traveled about from place to place to escape the designs of imaginary enemies upon their lives; many others have believed themselves poisoned, hypnotized or persecuted, and have tried to resist insane impulses to do harm. They may have succeeded in resisting the impulse for months and finally succumb to the ever-growing pathological change, and disaster follows. An insane idea may be fixed or transient. The transient thought may enter the brain, be dismissed and leave a vague suspicion or distrust. It

may recur again and again, and so frequently thrust itself upon the mind that by constant reiteration it becomes a dominant and fixed idea, and finally a controlling force, an overmastering power. Such a man will at last be so overcome by stress of disease that a violent or dangerous act is the legitimate outcome. Now, if his delusions influence his judgment he cannot be said to have a true understanding of the subject, nor does the knowledge that the act is wrong, in the sense that it is unlawful, or would be unlawful for other men, carry with it responsibility. No single act can be termed insane, but all the circumstances and conditions which produce it must be carefully considered in order to fix its quality. There may be a vast difference between the act of an insane man and an insane act. Many acts of the insane are perfectly rational. Many believe that because a patient is able to write a coherent letter he ought not to be confined in an institution for the treatment of the insane. In judging of an act the chief point is to determine what are the premises upon which to base a reason for it. To pronounce a correct opinion of a person's mental condition requires a very complete knowledge of the man, and renders each case a most interesting psychological study, and we are all, to a certain extent, psychologists. It is not left to the physician, the metaphysician or the philosopher alone to study mental phenomena. The jurist, the minister, the sociologist, the politician, each study the mind in his own peculiar way. While in some cases of insanity the legal test of responsibility is not easy of application, in others it is very simple. Belonging to this class we have paranoiacs, chronic maniacs, paretics, epileptics, melancholia, idiocy and imbecility. It is the paranoiac, the chronic maniac and the melancholiac with delusions who are most dangerous. They may conceal their delusions, show much cunning, concoct plans and carry them out with a definiteness of purpose scarcely equaled by the sane. The paranoiac is the most dangerous individual. He is filled with high notions of self-conceit, and a desire to be the center of public notice, and he regards

being locked up in a hospital for insane as a rank injustice. His trial is always made sensational and his self-love is more wounded by being adjudged insane than it would be to be sentenced to a term in the penitentiary. No mistaken public sympathy should ever be allowed to interest itself for his release. The parietic is usually so evidently insane, and often his insanity is manifested in so foolish a manner, that his condition is usually demonstrable before courts and juries.

Epileptics sometimes commit crime while under the influence of epileptic frenzy, or while in epileptic states, and retain no memory of the act whatever.

Many of the most shocking crimes have been committed by epileptics. The main points to determine are whether epilepsy exists and is the patient dangerous to be at large.

Demented persons sometimes commit crimes, but they are usually of a minor character. Idiots and imbeciles showing a dangerous tendency are usually promptly confined, and their condition is so manifest that no defense other than irresponsibility is attempted.

The melancholiac is usually suicidal, though sometimes his delusions regarding his condition and its cause lead him into homicidal acts.

Now these are the classes which the writer thinks should be separated from the ordinary insane person.

At the Cleveland State Hospital there are now, and always have been, a greater or less number of these insane criminals and criminal insane, and insane offenders living in closest intimacy with the other patients, dining at the same table, sleeping in the same room, adjoining their very beds; spending the whole of their days in constant association upon the ward; and generally in closest intercourse and communication. When it is considered that the patients in general in this institution are neither criminals, paupers nor tramps, but are mainly the unfortunate members of honest and respectable tax-paying families who cheerfully contribute to the support of our institutions, it seems monstrous that they should be forced

into such intimate contact with murderers and other felons from time to time committed to the institution by the courts.

Among the patients now confined in the Cleveland State Hospital are professional men, merchants, farmers and mechanics, and women of the same walks in life; some of them are only temporarily insane, and will shortly recover and resume their former occupations and stations in society. Some of the patients are as intelligent and rational on most subjects as any sane person; they are thoroughly conscious of their position, and to such it is an indignity and an outrage to subject them to the society of criminals, and the State should relieve itself from such disgrace as soon as possible.

In the institution for insane criminals at Mattewan, N. Y., there is an average daily population of about three hundred; in the insane department of the Ohio penitentiary there is an average population of thirty. The other criminal insane persons are distributed through the State Hospitals for the insane, associating with the relatives and friends of the best people in our land. Are you willing to have your son, or your wife, or daughter, mingle daily, hourly, with those who are vicious and who have spent a term of sentence in an institution filled with criminals? Now, as it is so obviously unjust that the inmates of ordinary hospitals and asylums should be compelled to associate with criminals, so it is obviously improper to force insane persons, though criminal, to endure the scanty accommodations, confinement and monotonously rigorous routine of an ordinary prison. What, then, is to be done with these unfortunate men and women?

We believe it eminently wise and proper that the State should build an institution, keeping in view the special requirements of the class for which it is designed, representing in its architectural, sanitary and economical features the highest type of asylum construction, and with sufficient means of restriction to remove any apprehension of danger from the inmates.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

MEDICAL ASPECTS OF ARMY LIFE AT TAMPA.

Tampa, Fla., is a city of 20,000 or 22,000 inhabitants, situated at the mouth of Hillsborough River, which empties into Hillsborough Bay, an arm of Tampa Bay, and a few miles from where the latter widens out into the Gulf of Mexico. The land here has but a few feet of elevation above the level of the bay, which it rivals in levelness. The soil is sandy. The country varies between dead level stretches covered with scattering, stunted pine woods and palmetto and cypress swamps. Near the streams there is a tangle of other foliage than pine—cypress and palmetto—bay, live oak, chinaberry and impassable thicket of shrubbery and vines.

Troops have been encamped all about Tampa since the middle of May. The camp grounds, although fairly dry at first, since the advent of the rainy season, which set in this year later than usual, with July, have varied in different degrees from bad to worse. The subsoil water stands never many feet below the surface of the ground, and, since the rains have set in, in some of the camps it stands only two feet, or 18 inches, or 12, or six inches below the surface, and in some actually at the surface, making it impossible to secure any drainage or any opportunity to use the customary sinks and latrines, into which dry earth should be thrown twice a day, according to regulations, to cover the refuse of the camp. The bringing of soldiers from different climates farther North into the heat and moisture of Southern Florida naturally produced innumerable cases of heat exhaustion, besides the ordinary summer diseases, and the disorders, accidents and injuries incident to the life of a military camp. But this country is a hot-bed of the malarial organisms, and especially since the rains began has it shown its activity. A man from the North coming here does his work only with a struggle against the overpowering depression of the steamy heat of the air, and either with his ears buzzing with quinin or his brain befogged with malarial poison, while diarrhea, obstinate and well-nigh intractable, steals away his native strength and energy. Under these conditions, in which vigorous and sustained physical or mental effort is impossible, he is supposed to undergo a training and hardening and acclimatizing process which shall improve his vitality and stamina and render him efficient as soldier or officer.

When the rainy season set in, the malarial fevers notably increased, and some typhoid manifested itself. Malaria, mostly of an intermittent type—though there are occasional cases of remittent—increases after every rain. The old observation that malaria prevails according to the nearness of the subsoil water to the surface of the ground has again been proven correct. The daily battle of the army surgeon at Tampa has been about as

follows: Malarial fevers, typhoid (of late perhaps typhoid should be placed first in the list), acute diarrhea, dysentery, chronic diarrhea, boils and carbuncles (a regular epidemic of furunculosis), hemorrhoids and fistula in ano, caused or aggravated by diarrhea and dysentery; syphilis and gonorrhea, and their consequences—buboes, orchitis, etc., etc.; bruises and sprains, fractures and gunshot wounds, horse kicks and ray stings, vaccination inflammations, measles, and a variety of ailments too numerous to mention. Of syphilis we have had what seemed to me a most remarkable number of cases, mostly among new recruits. The most of the lesions are secondary. I do not know how to account for the way the syphilides have been blooming out during the past two weeks. If each individual soldier had embraced the last chance of contracting it before leaving for the South, there would hardly be a greater percentage of cases. It is likely that many of the men had been taking treatment up to the time of their leaving home. Then, while no lesion was showing, they enlisted, and being since without treatment, the disease again manifests itself. Whether the depressing influences of this climate, the malaria and the heat could so lower the vitality as to cause syphilis which had remained quiescent temporarily as a result of treatment and nature's own efforts, again to become active, one would not like to say. A question might be raised, also, whether revaccination, which has been generally practiced among the soldiers, had anything to do with exciting the appearance of specific skin lesions. We know how frequently strumous eruptions and glandular swellings will follow the excitement of the system by the vaccine virus, but do not remember ever reading or hearing that syphilitic manifestations might be hastened in their appearance by vaccination or revaccination, and have no literature at hand to consult. It does not seem probable. Some of the syphilitic cases were not among those revaccinated, although many of them had recently been revaccinated.

The ray sting is a punctured wound caused by the ray

fish while the men are bathing in the waters of the bay. The puncture looks somewhat as if made with a three-cornered file or stiletto, and may be a mere puncture or an inch or two deep. The wound is most often about the foot or ankle (similar ones are made by the horseshoe crab), and appears to cause considerable pain throughout the whole limb for a time. At some of the camps they were considered poisonous and were cauterized and took a long time to heal. We treated them simply by washing with carbolized solution or the application of lotion of lead and opium, and the pain and inflammation soon subsided and healing promptly took place. Judging by results, it is thought unlikely that the wound is poisoned by the fish, but it is merely a puncture made by a spine or thorn of shell not particularly clean. Perhaps the introduction of salt water to the wound has something to do with the intense stinging complained of.

Naturally, certain troubles are incident to the life of the cavalryman which do not trouble the "doughboy," or infantryman. For instance, boils and abrasions upon the buttocks, thighs or legs from friction of the saddle; bruises and strains about the knee-joints from crowding of the horses, contused or fractured shoulders, collar bones, arms or thigh by falling from or with a horse, etc. Occasionally a horseman gets a black eye, mashed nose or loosened teeth, by being struck by the top of his horse's head. Injuries of the perineal structures are not uncommon, and at least one inguinal hernia, caused by the horn of a saddle, has come under our hands. Kicks are innumerable, but seldom more than a contusion. If about knee or shin they sometimes cause periosteal or synovial troubles. New recruits in the cavalry frequently come with complaints of "shortness of breath," "palpitation of the heart," or pains in sides, or under shoulder blades, which are occasioned by nothing else than the unaccustomed motion of the horse, particularly in fast riding. Usually they are only told to persevere; but sometimes a little rest is necessary, and occasionally a heart stimulant or sedative may be prescribed for a few days. The in-

fantry, as one would expect, suffer more from trouble of the lower extremities. Abrasions and swellings of feet and ankles, lame knees and weak ankles are more in their line. Lately sickness has been increasing to a most alarming degree. To illustrate from personal experiences:

The regimental hospital of the 3rd U. S. Cavalry was obliged to resume the duties of a brigade hospital, with only the facilities suitable for a regiment. The sick reports of the 3rd and 6th Cavalry and several detachments of infantry were taken here, and the 5th and 2nd Cavalry took sick call at their own camps, adjacent to ours, and reported here as brigade headquarters. Quoting from my diary: "Monday, July 18th.—Took sick report at 3rd Cavalry Brigade Hospital. Three hundred and fifty men on sick report." As the whole strength of the command represented on that sick report was about 2,000 men, it shows that about one-sixth of the command was disabled. Regiments decimated in battle are considered to have suffered severely. But the troops stationed about Tampa have endured much more in annoyances, hardships, illness and resulting disabilities, and actual mortality, than occurs to many an army during an active campaign, including skirmishes and battles. Take, for instance, Troop M of the 3rd Cavalry. The records show that during the last week of July 39 out of 101 men were unable to do duty. For the soldier undergoing the dangers from disease to drag himself about with malarial fever or the onset of typhoid, or with an intractable cramping and emaciating diarrhea or dysentery, responding to the calls for drills and exercises, while his comrades one after another succumb to disease, and he feels that his turn must come soon, surely requires as much courage and endurance as to meet the enemy who attacks with firearms or sabre. Officers and men suffer alike; and for the surgeons it is like a battle extended and continuous week after week. Man after man is carried in exhausted by the heat, or contorted by cramps, or staggers in and falls at our feet with fully developed malarial or typhoid fever, or both

together, which he can no longer endure. And we must live among them and breathe the same foggy air rising nightly from the swamps and laden with the stench of the latrines. And this must be endured hour after hour, day after day, and week after week, without the inspiration that comes with the excitement of battle and with no hope of glory; for the world has no applause save for those fortunate enough to get the momentary risk of bad marksmanship, and be forever afterward celebrated as heroes living, or held in remembrance as heroes dead.

YELLOW FEVER UNDER DIFFICULTIES.

Personal notes, received from a patient suffering from yellow fever in one of the military hospital tents near Santiago de Cuba, give a vivid description of the difficulties and hardships which our soldier boys must undergo in that half-civilized territory so far from home.

After passing through most of the battles and skirmishes in the vicinity, yellow fever was contracted by our friend, and after a few days of suffering, without medical assistance, he was sent to a malarial fever hospital, from which he was immediately transferred to a yellow fever hospital, or tent. The tent was an old one, with no flies, except an abundance of those with wings, which are said to take great delight in swarming about the eyes, nose and mouth of one confined to bed. He states that his temperature during illness ranged from $104\frac{1}{2}$ to 105 degrees. He was taken ill on July 14 and is at date, July 30, able only to sit in a camp chair, but not able to stand upon his feet, which are badly swollen as a result of the disease.

The atmosphere is, of course, intensely hot, and, owing to the leaky condition of the canvas overhead, a rubber poncho is kept upon his bed during showers to keep it from becoming saturated with water. The nurses in attendance were colored men, members of a colored:

regiment, likewise in the hospital for treatment, but able to give some attention to a sick comrade of the Caucasian race.

The conveniences and hospital equipment cannot be said to be very extensive, as one chamber, a bed-pan and three urinals are said to suffice for the patients of this hospital. The diet furnished is mostly liquid. Malted milk, soup, oatmeal and the like being used. During convalescence fresh bread was furnished for a time, but was soon substituted by hard tack, owing to a scarcity of the former article. The author of the communication states that he has a private can of condensed milk hung up by a string where the ants cannot get at it, and he spreads the milk upon his bread in place of butter, as he claims to be very fond of it.

The cot furnished was the first upon which he had slept since arriving upon the island sometime in June, and a pillow which was obtained as a special favor about one week after entering the hospital, was likewise considered a great luxury.

It is affirmed that, notwithstanding the hardships of this sort of illness, that the sacrifice is not too great to pay for a prospective pair of new shoes that will fit, old ones having been cast aside along the line of march in favor of mismates found by the wayside.

Our informant seems to be in the best of spirits and entirely undaunted by the hardships of army life or the privations and dangers consequent to a confinement with "yellow jack."

Two physicians were in charge of this hospital, neither one of whom were in a good physical condition.

A few quotations from the communication are as follows:

"I was placed in a large hospital tent by myself, on a cot, the first cot I had slept on since I left the boat (some time in June). Soon afterward the doctor procured me a pillow, another great luxury which eased my pain greatly. . . . The tent is old and so protects the eyes, but it has no flies and when it rains the water driz-

zles through, requiring me to put my rubber poncho over me. At night dews are so heavy that everything is saturated and has a disagreeable odor. Yesterday there were about 120 patients and so far 16 have died. The hospital was established July 13, so 16 died in about two weeks. . . . The third day I was in the hospital the doctor assigned me a special attendant, one of the colored patients who had come down in the ambulance with me, and now convalescing. . . . For several days my temperature ran from 104½ to 105. I did not know this till afterward. My attendant was willing, and for some reason had taken a liking to me in the ambulance and was glad of the opportunity of doing me a service. He was soon sent to the front and his place was taken by a second of my ambulance companions, also colored. . . . The service here is very slim. There are but a few attendants to many patients. The trouble is, I suppose, that being a yellow fever hospital but few immune attendants can be obtained. There are two doctors, one of whom is now sick, possibly with yellow fever. Doctor ——— is an immune, but he was also sick one day, so that another doctor had to be sent for. My attendant is now sick with a severe chill, but fortunately I need little waiting besides getting my meals. My attendant has a bunk, a luxury which not all of the patients enjoy, though now the new supply of bunks may have fitted them all out. . . . The flies are persistent. During the first part of my illness I learned to lie patiently and let the little pests crawl all over my face, in my ears, mouth, nostrils and corners of my eyes. I counted twelve (with my pocket mirror) congregated on my lips. A move of the hand made them swarm as they do on a kitchen table over the dirty plates. When my eyes grew strong enough to open I sometimes amused myself by taking my mirror and catching the flies in the corners of my eyes. I killed twelve in much less than a minute.

“ Last night I dreamed I was at home in a comfortable bed and was very busy, making the best of my time, as I seemed to know instinctively that I must be back in

Cuba by daylight. I amuse myself sometimes by imagining that I am seated at our lunch table at home with all the dainties spread before me. In the early part of my sickness my eyes pained me too much to open, so I laid all day long in the dark and eased the pain by such imaginings. My back ached so badly I was obliged to change my position frequently, and at night I imagined that my limbs belonged to separate persons. While I made my head comfortable, I would wonder how the other fellows were managing with their legs. . . . My appetite is much better now, and I take rice soup, oatmeal, cornmeal, chicken soup (canned), a great luxury! I also get canned peaches and strawberry jam. Malted milk and beef extract were both on my *ménu*, but they are too much like medicine and I have discarded them. For several days we had fresh bread, but now that has given out and we are reduced to hard tack. I have a private can of condensed milk hanging out of the reach of the ants and this I often spread on my bread to serve in the place of butter. I have also a bottle of lime juice at my disposal, so that I feel quite like a millionaire. It takes but little to make a man happy in adverse circumstances. Many of the patients have returned to the front, all of their clothing having been burned. They received an entire new outfit with exception of the leggings. . . . Six more deaths were reported along the line in front. Yellow fever seems to be getting bad and I am thankful I have pulled through with no more than an average severe case. . . . My feet are swollen now so that the ankle bones form no prominences whatever, and there are creases at the base of the toes, on top, just like a baby's. I have now been here thirteen days. . . .

"To-day the water came through the tent in rivers and I had to perch my feet on a second chair to keep them out of the water."

C. W. S.

NEUROLOGICAL NOTES.

In the "Proceedings" of the Neurological Society of London, held at Cambridge, April 23, 1898, we note the reading of a communication from Christian Sihler, of Cleveland, on the "Motor Nerve Terminations *Within* the Muscle Spindle." The paper was presented by F. E. Batten. To Dr. Batten and C. S. Sherrington we owe the most of the early work on the nerves of the muscle spindles, and we are glad to note that the highly original work of Dr. Sihler is noticed so favorably by so great authority.

Meningococcus of Weichselbaum in the Nasal Secretions of Healthy People.—Schiff (*Centrablatt für inn. Med.*, 1898, No. 22) has made some recent observations on the occurrence of the meningococcus in the nasal secretions of normal people with results that are at once suggestive and startling.

Following the lead of many observers, he examined for and found the meningococcus in the nasal secretions of a patient that presented all of the clinical symptoms of meningitis. Lumbar puncture, however, revealed the presence of the tubercle bacillus *sans* cocci. The diagnosis of tubercular meningitis was confirmed by autopsy. A resolve to sift the question led Schiff to examine the nasal secretions of 27 people suffering from various chronic diseases. Seven possessed the coccus, three in such numbers as to admit of culture which proved virulent to guinea-pigs.

If these observations are correct, we are no longer warranted in assuming that the presence of the meningococcus in the nasal secretions is positive evidence that our patient is suffering from the epidemic form of meningitis produced by the coccus of Weichselbaum. We are also given a poignant suggestion as to the source of the meningeal inflammation that not uncommonly occurs after fracture that involves the vault of the pharynx, nose and accessory cavities, and some of the minor operations within the nose and accessory sinuses.

The Diagnostic and Prognostic Value of Thermometry in the Apoplectic State.—The great value of temperature observations in irritative as well as destructive lesions of the brain is engaging the earnest attention of all thoughtful men. Dana has written much on the prognostic worth of the temperature curve of apoplexy, and Eskridge not only recognizes its prognostic importance, but lays great stress on the diagnostic signification of the difference in temperature of the two sides of the body in irritative as well as destructive lesions of the brain. His observations are yet incomplete and his statements largely provisional, but they so nearly correspond with some observations of the writer that to him their value seems certain.

Gilles de Tourette (*Semaine Medicale*, June 8, 1898) urges the importance of temperature observations in cerebral hemorrhage. At the time of the attack the temperature of the body falls, but soon begins an ascent that in course of 24 hours reaches 100.4 or 102.0 degrees F. The temperature should be taken every hour, or at least every second hour.

We may sum up the important prognostic points drawn from the temperature curve as follows: If the temperature reaches 104 degrees F. during the first 24 hours, a rapidly fatal issue may be expected. If, on the other hand, 102.2 degrees is the maximum at the end of that period, a favorable prognosis may be entertained. If a gradual fall of the mercury is experienced on the following days, we can with each added day and each fraction of thermal fall predict with increasing confidence a favorable result. It is well to keep in mind, however, the ever-present danger of a second hemorrhage, and not be over-sanguine until three or four days have passed. If after 24 hours the temperature oscillates around 102.2 degrees F., and we have early contracted pupils and conjugate deviation of the head and eyes, then the prognosis should be grave. Should the temperature remain at or above 102.2 degrees F. for two or three days and acute decubitus develop, death may be expected.

Tourette also calls attention to the value of the thermometer in the differential diagnosis between organic cerebral lesions, such as tumor, softening, fracture and epilepsy, on the one hand, and intoxication, hysteria and malingering, on the other hand. The temperature is always elevated in the former affections, while in poisoning from alcohol, belladonna, digitalis, aconite, hyoscyamus, and in diabetic and uræmic coma the temperature is below normal. In hysteria and in malingering it is normal.

The Treatment of Cerebral Hemorrhage.—Dr. Byrom Bramwell (*Treatment*, July 8, 1898), in an article on this subject, gives the following treatment of the initial attack:

The first measure demanded is an attempt to arrest the bleeding and limit the extravasation by lessening the intracranial blood pressure. The recumbent should be changed to a half sitting posture; cold to the head, warmth and sinapisms to the feet; leeches behind the ears; and two or three drops of croton oil for a purge are aids to the desired end.

Bramwell believes that bleeding is indicated and useful to patients whose face, head and neck are turgid; when the left ventricle is hypertrophied and the pulse full, strong and slow. The aged, debilitated or diseased with feeble, rapid or irregular circulation should never be bled. If in doubt as to the advisability of venesection, croton oil, enemas, or both, should be used. Cathartics demand time, so that where turgid vessels or deepening coma in a plethoric patient threatens life, a vein or artery should be opened without awaiting the effect of the purge. The ingravescent type, with its deepening coma and slowing pulse and disturbed respiration, may demand the consideration of a trephining operation and tapping the hemorrhagic cavity, thus forestalling the fatal effect of an hemorrhagic invasion of the lateral ventricle.

He has little faith in the hæmostatic action of internal remedies, but thinks certain cases may be suitably treated by those drugs that are known to lower blood tension, the nitrites preferred; yet the lancet is by all means the best remedy.

ALDRICH.

Periscope.

ALCARNOSE.

A mixture of albumose and maltose, which contains proteid and carbohydrate digested and in a particularly adaptable form for the bowel, has been especially recommended as the best preparation for nourishing enema through extensive use by Brandenburg and Hupperz at the Giessen medical clinic.

It is administered in 4 capsules making 2 grammes of nitrogen after having used a cleansing enema.

Untoward results have never been noticed.—*Deutsche Med. Wochenschr.*, 20.

ALCOHOL AS A DISINFECTANT.

Goenner, Basel, has repeated the researches of Ahlfeld-Vahle and Leedhom-Green in reference to the disinfecting power of alcohol, as well as a series of independent experiments, and has come to the conclusion that, while alcohol is a disinfectant it is much weaker than bichlorid.

With *B. pyocyaneus* and staphylococci he could render them inactive during a period practical for disinfection, but with streptococci, and especially with anthrax and potatoe bacillus it is inactive.

He therefore recommends that alcohol be used only with vigorous agitation and always with bichlorid.—*Muenchener Med. Wochenschr.*, 20.

ABDOMINAL MASSAGE.

Scheim, Budapest, records six cases where by massage of the abdominal wall the secretion of the milk was stimulated in a high degree.

It appeared relatively early and profuse with some women, and at times in cases where it could not have been expected.

The period of confinement was thereby not influenced in any manner, unless it was shortened.—*Wiener Klin. Wochenschr.*, 18.

STERILIZED WATER.

Is recommended by Mongoni (*Bulletin Med.*, 20, 1898) in gastrointestinal catarrh of children.

The bowel is first cleaned out with cathartics, then the sterilized water is given 300 to 400 grammes in doses of 150 grammes, either alone or with ether, etc., as injections.

URTICARIA.

Gaucher (*Revue des maladies de l'enfance*, March, 1898) says it is favorably influenced with a spray of the following:

Alcohol.	
Chloroform.	
Ether	à 30.0
Menthol	10.0

UTERIN HEMORRHAGE, A TONIC.

Palmer (*Muenchener Med. Wochenschr.*, 22) has had good results from the following:

Quinia sulf.	2.5
Ergotin	1.25
Strychnin sulf.	0.03

M. ft. pill. No. 20.

Sig. One three times a day.

REMEDY FOR TAPEWORM.

Guida (*Muenchener Med. Wochenschr.*, 22) recommends the following combination:

Acid salicylic	0.5
Ext. filic	0.75
Gum Arabic	7.5
Syr. simpl.	50.0
Ol. cinnamioni	gtt. x
Aq. destillata	100.0

To be taken in the morning, after fasting, in two portions within half an hour.

CHRONIC CYSTITIS.

Colin (*Journ. de médecine de Paris*) recommends Picot's treatment, which is:

Guaiacol	1.5
Iodoform	1.0
Ol. oliv. steril.	ad 30.0

Once or twice a day 10 to 20 drops are injected into the bladder.

WHOOPIING COUGH.

Lancaster (*Phil. Med. Journ.*) recommends:

Tinct. belladonna	5.0
Phenacetin	2.5
Extr. castan vesc.	30.0
Spir. rectificatiss.	ad 50.

For children of one year, 10 drops every 2 to 6 hours; for children of 10 years, a teaspoonful. SPENZER.

Among Our Exchanges.

The *furor operandi*, together with the comparatively low mortality attending operations for the removal of uterus and adnexa, and, possibly, the fact that about a major operation there is more of *eclat*, and far less actual trouble, to say nothing of a more remunerative emolument; all these have tended to relegate *intra-uterine medication* into somewhat of "innocuous desuetude." And yet we find it hard to believe that the results claimed by the older practitioners as following cautious and faithful intra-uterine medication were wholly mythical. They were men of as sharp eyes, as keen senses, and as thoroughly trained judgment as we, and though in matters of bacteriology and pathology we are, doubtless, far in advance of them, they used to study cases and weigh evidence pretty carefully, and it would seem that there must have been a relation of cause and effect between the improvement they noted in their cases, and the therapeutic measures they were wont to adopt. Even gynecologists are beginning to acknowledge that there may be cases of tubal distension due to mere closure of the mouth of the tube from swelling of the endometrium, a condition where a radical operation is no more indicated than is a mastoid operation for closure of the eustachian tube by a pharyngitis, such cases, and cases of granular endometritis with large cavity and sensitive uterine body and cases where forcible dilatation and curettement are contra-indicated, are often greatly benefited, if not wholly cured by a thorough course of intra-uterine medication.

DR. FRANK A. GLASGOW, of St. Louis, prefers as an applicator the old-fashioned slippery elm tent, which he sterilizes in a 1-4000 solution of bichloride of mercury in alcohol.¹ The sterilized tent is trimmed to the size wanted, broken in several places to make it limber, dipped for a few moments into the medicament, which it rapidly absorbs; then dipped for a moment into water or glycerin to moisten the surface mucilage and render the introduction painless, and at once introduced into the cleansed cervix and retained by a pledget of cotton. To both the tent and the cotton should be attached a short string which hangs out of the vulva, and by which they may be withdrawn at any time. Tincture of iodine may be used, full strength. Carbolyzed iodine or carbolic acid should be reduced to one-fourth strength. If the tent be

¹ *Kansas Med. Jour.*, Feb. 26, '98.

too large it will dilate the cervical canal too rapidly and cause pain; if it be too long — i. e., so long as to impinge on the fundus — it is likely to cause nausea. The tent may be removed in from five to six hours, or even in two hours if it begin to pain too severely. In case of simple stenosis it may remain for two or three days during the menstrual flow without ill effect but, on the contrary, with material relief of pain. For *stenosis* or *sterility*, bichloride, with which the tent is sterilized, is often all the medicament needed. In cases of diseased endometrium, however, by waiting till after the flow has ceased and much of the diseased membrane has softened down and passed away, the medicament has a better chance of getting in its work somewhere near the base of the endometrium. When the swollen tent is withdrawn, all the uterine contents follow it out through the dilated cervical canal. Where continuous drainage is indicated the silver wire spiral drain devised by DR. GLASGOW would seem to be eminently practical. It is a perfectly flexible stem pessary, so small as to be readily introduced into the undilated cervical canal, and worn without pain, and yet so permeable along its whole length as to furnish an almost perfect drainage. A silver wire, preferably No. 24 or 25, is laid along a hat-pin for about three inches, beginning at the point of the hat-pin. Then the wire is wound in a close spiral, each turn touching the preceding, backward along the hat-pin and its own straight portion, for about two inches, and then cut short. Withdrawing the hat-pin there remains a somewhat flattened spiral about two inches long with a wire running through its whole calibre and projecting about an inch from its lower end. This projecting end is then passed through a thin button and back again into the spiral, which is now pulled out a little to separate the coils, so that fluids may find readier access to its calibre, and so that each turn may exercise an individual pressure on the cervical canal and thus keep the coil more securely in its place. When the neck of the womb is in its normal position the button rests in the posterior vaginal wall and supports the coil *in situ*. DR. GLASGOW used this drainage coil in two cases of undoubted pyosalpiux to his cost. There was resolution of the thickened endometrium. The contents of the swollen tubes drained into the uterus and out through the coil. The patients made such radical improvement that the doctor lost the prospective laparotomy in each case. It is a good thing for the general practitioner that

gynecologists are again admitting the value of intra-uterine medication, such as can be successfully carried out by the general practitioner in his own office. By such medication he will be able to effectively relieve a class of cases hitherto claimed as special by the specialist. By such prompt and thorough local treatment he may obtain both credit and emolument, and often forestall the necessity of a laparotomy from which he may expect neither credit nor emolument.

L. B. T.

New Books.

TEXT BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M. D. 5th edition, revised by Henry Leffmann, A. M., M. D., Ph. D. P. Blakiston, Son & Co., Phila., 1898.

The excellence and deservedly high popularity attained by this text-book was due to the able and thorough manner in which the principles of the science were presented by Dr. Reese, and bespoke of the long and extensive experiences of the author along the lines which it represents. The fifth edition, revised by Dr. Leffmann, will in nowise detract from the value of its predecessors, for the publishers were extremely fortunate in securing the services of so thorough a student as reviser.

The section on poisons is good and the addition of the section on putrefactive poisons proper.

An omission which it might be well to call attention to is that under the head of treatment of hydrocyanic acid poisoning no mention is made of the use of cobaltous nitrate or of sodium thiosulphate as antidotes, they being vastly superior to any given in the list.

The pleasing, instructive and entertaining character of the work must recommend it to student, physician, lawyer and well informed layman alike.

SPENZER.

PHYSICAL DIAGNOSIS—TYSON. *Manual of Physical Diagnosis for the use of Students and Physicians.* By James Tyson, M. D., Professor of Clinical Medicine in the University of Pennsylvania and Physician to the University Hospital; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Association of American Physicians, etc. Third edition, revised and enlarged, with colored and other illustrations. Cloth, \$1.50. Philadelphia. P. Blakiston, Son & Co., 1012 Walnut St. 1898.

This work is admirably adapted to the purpose for which it is written, and especially as a handbook for stu-

dents and young practitioners. The subject matter is well arranged and is clearly and concisely worded. The book is illustrated with numerous cuts and a few colored plates.

In revising this work the author has enlarged the section in relation to the examination of blood, and the same is true of the section on the chemical examination of gastric contents. Due space is given to bacteriological examinations, X rays and other means of coming at a diagnosis up-to-date.

C. W. S.

PAMPHLETS RECEIVED.

N. STONE SCOTT, M. D., Cleveland, Ohio: "NON-MALIGNANT STENOSIS OF THE PYLORUS AND DUODENUM." "A CASE OF ENTEROPLASTY;" from *Cleveland Journal of Medicine*.

A. H. OHLMANN-DUMESNIL, A. M., M. D., of St. Louis, Mo.: A RAPID TREATMENT OF CHANCROID AND ULCERATIVE SYPHILITIC LESIONS; from the *St. Louis Medical and Surgical Journal*.

EDWARD O. OTIS, M. D., of Boston, Mass.: THE TUBERCULIN TEST IN CERVICAL ADENITIS; from the *Medical News*.

ALBERT WOLDERT, Ph. G., M. D., of Philadelphia: THE USE OF QUININE IN MALARIAL HEMOGLOBINURIA; from *The Medical News*.

C. H. HUGHES, M. D., of St. Louis: "PROGRESS IN NEUROLOGY." "MEDICAL SERVICE AND MEDICAL FEES." "THE SANITARY SALVAGE OF OUR SOLDIERS IN CUBA;" from *The Alienist and Neurologist*.

THEO. R. MACCLURE, Chief Clerk for State Board of Health Office, Lansing, Michigan: "A QUARTER CENTURY OF PUBLIC HEALTH WORK IN MICHIGAN;" from Robert Smith Printing Co., State Printers and Publishers.

JOSEPH EASTMAN, M. D., LL. D., Indianapolis, Ind.: APPENDICITIS; from *The Medical and Surgical Monitor*.

L. WEBSTER FOX, A. M., M. D., Philadelphia, Pa.: CATARACT OPERATIONS; MULES'S OPERATION, illustrated by Skiagraphs; CAPSULOTOMY; OPERATION FOR PTERYGIUM; from *International Clinics*.

WILLIAM H. WELCH, M. D., Baltimore, Md.: REMARKS AT THE PRESENTATION OF THE CANDIDATES FOR THE DEGREE OF DOCTOR OF MEDICINE AT THE COMMENCEMENT OF THE JOHNS-HOPKINS UNIVERSITY, JUNE 14, 1898.

A QUARTER CENTURY OF PUBLIC HEALTH WORK IN MICHIGAN. By Theo. R. MacClure, Lansing, Mich. A beautifully illustrated record of the labors and achievements of the Michigan State Board of Health, including portraits and sketches of its members from the time of its organization. This is an ideal work of its kind and is not only a graceful tribute of the unselfish labor of the members of the State Board of Health, but it is also full of most valuable information.

Correspondence.

Editor Cleveland Medical Gazette.

DEAR SIR:—One is sometimes tempted to query in his mind whether the many absurd and, at times, disgusting notions prevalent among the laity of our race as to the remedies and methods used for the cure or alleviation of certain ailments are any improvement over those of "heathen Chinese."

The following illustrations to the contrary have come under my observation during the past twenty years, and occurred among persons by no means the most ignorant.

The first was that of a retired lake captain who, acting upon the suggestion of a good old lady of professed experience, took, early each morning, a wineglassful of fresh urine from a young heifer. Suffice it to say the patient, after a few days' trial of the remedy, concluded to allow his malady (consumption) to pursue its own course. The second was a child with diphtheria, about whose neck an extensive application of goose excrement was applied, to "draw the disease out." Still another in the list was a ten-year-old boy with a gaping wound over the upper third of the tibia. Nature being slow in repairing it, a good "Old Blue Stockings" of the neighborhood advised a poultice of chewed blue bread (rye bread), which was cheerfully prepared with energy by the buccinator muscles of the amorous urchins in the neighborhood. After a week of this brilliant treatment a physician took charge of the case and gave the wound a more healthy character by bringing the edges into apposition by suitably adjusted adhesive straps, and the wound rapidly healed. I have often thought how fortunate it was for this boy that the saliva in the "blue bread" poultice was not furnished by mouths containing specific ulcers.

Still another recent case was with fairly intelligent parents, who were with the greatest difficulty persuaded against giving their six-year-old daughter, for the cure of nocturnal incontinence of urine, the grease obtained from frying a very young mouse, the mother having heard of many instances wherein this remedy had cured, and which had resisted every other form of treatment. No doubt many physicians have had children brought to them suffering from the effects of a dog bite, with a tuft of the dog's hair bound on to "take out the poison."

As loathsome and full of delusion as these notions

are, they display but little less sense than the modern consumption of proprietary medicines. How often do we see people squander their hard-earned money for quack nostrums, advertised to cure everything from an ingrowing toe nail to a case of meningitis, and often to their fatal detriment. Medical aid is not summoned until both the last dollar and the last ray of hope for recovery have gone.

IRWIN C. CARLISLE.

DETROIT, MICH., U. S. A., July 26, 1898.

S. W. Kelley, M. D., Editor Cleveland Medical Gazette.

DEAR SIR:—We shall esteem it a favor if you will read carefully the advance proof, which we hand you herewith, of an editorial prepared by Mr. Joseph Helfman, editor of the *Bulletin of Pharmacy*, for the August issue of that journal; also proof of an editorial by Dr. F. W. Mann, editor of the *Medical Age*. You will observe that the Hoechst Farbwerke, manufacturers of the Behring Antitoxin, make pretensions to a monopoly of that therapeutic agent in the American market, on the strength of a patent which was issued very recently to Prof. Emil Behring, and that we, as manufacturers of diphtheria Antitoxin, have been served with notice to quit.

In the enclosed argument, drafted by Dr. Charles T. McClintock, one of the directors of the Biological Department, are set forth the contributions made to the serum treatment of diphtheria, directly and indirectly, by a considerable number of Behring's predecessors and contemporaries.

In submitting this material to your consideration we earnestly trust that you will see your way to its reproduction in the columns of your valued journal, but we should be far better pleased if you would take up the subject for editorial treatment in your own manner and in your own language.

We make no appeal to any man's passions, and least of all do we seek to make capital of any base and mean spirit of international jealousy; but we feel confident that as an editor and expounder of ethical medicine, and as a patriotic American, you will resent the presumption which seeks to fasten upon the American medical profession and drug trade a hateful monopoly which the foreigner would vainly solicit in his native land.

Unless the enclosed material appeals to your convic-

tions and sense of justice, we trust that you will feel under not the slightest constraint to discuss it in the editorial columns of the GAZETTE.

We have retained the services of the foremost patent lawyers in the United States, Messrs. Betts, Betts, Sheffield & Betts, of New York, and we propose to fight the pretended monopoly to the last trench. What we fear, in the meantime, is not the enforcement of the patent, but rather the possible intimidation to which the manufacturers and selling agents of the Behring serum may resort in their effort to alarm the physicians and pharmacists who place implicit reliance on our Anti-Diphtheritic Serum. We therefore particularly request that in any article which you may write for the GAZETTE, you will insert a paragraph assuring your readers emphatically that Parke, Davis & Co. will protect and defend them from any legal proceedings that may be brought as a result of their purchase, sale and use of our serum, we assuming the entire expense of such defense.

We invite your particular attention to the fact that five distinct rejections of Professor Behring's application were interposed to the final granting of the patent. After each refusal the application was renewed, only to be again rejected until finally, and as late as June 21, 1898, the patent was granted by the Board of Appeals in Washington, in clear contravention of both law and justice.

With kind regards, we remain,

Very truly yours,

PARKE, DAVIS & CO.,

W. M. WARREN, Gen'l Manager.

[NOTE. — The editorials referred to are reproduced in full in this number of the GAZETTE, under the head of "Notes and Comments." The subject is there handled in a masterly way, and Professor Helfman and Dr. Mann have fully expressed the sentiments of the GAZETTE in advance. What they have said is heartily endorsed.— C. W. S.]

Notes and Comments.

Dr. William Osler, of Baltimore, has recently been elected to membership in the Royal Society of England.

Dr. Hunter Robb is spending a few weeks in rest at Rapid City, Manitoba.

Dr. and Mrs. Obed Yost, of Avon, have recently returned from a trip to Montreal and Alexandria Bay.

Dr. S. C. Ayres, of Cincinnati, has been elected professor of ophthalmology in the medical department of the University of Cincinnati, the Medical College of Ohio.

Dr. R. C. M. Page, Professor of General Medicine and Instructor in Physical Diagnosis at the New York Polyclinic and Public Dispensaries of the city of New York, died on June 19. Dr. Page will be greatly missed, as he was much beloved and highly respected by the students at the Polyclinic.

Major Frank E. Bunts, Surgeon of the First Ohio Cavalry, returned to Cleveland in August, to visit his brother, who was seriously ill. The doctor has been in camp at Lakeland, 32 miles from Tampa, Fla. Camp life, he says, becomes very monotonous.

"The Oil City Blizzard" says that it is never best to judge a person by his outside appearance. A shabby old coat may enwrap a newspaper publisher, while a man wearing a high plug hat and sporting a gold-headed cane may be a delinquent subscriber.

Dr. S. W. Kelley, Surgeon with the Third U. S. Cavalry, has left Tampa, Fla. He states that the troop camped for a few days at Fernandina, and now, August 12, is en route to Montauk Point, N. Y. Such a move is much like the moving of a caravan and several trains of cars are required for the purpose. Stock trains for the horses and mules, of which there are about 1,000, and freight trains for baggage and equipment, ambulances and ordnance and stores; day coaches for the well men and Pullman sleeping cars for the sick. The sick are laid in the shade of trees while the hospital tents and baggage are packed for a start. The medical outfit, of which he is at present in full charge, consists of nine ambulances with four mule teams each; four hospital tents, the strictly medical outfit; 19 hospital corps men, and one assistant surgeon.

The journey to Montauk Point is expected to take about five days.

The 108th Quarterly Session of the Union Medical Association of Northeastern Ohio met at the Cleveland Medical Library, 586 Prospect street, on August 9, 1898. The program was as follows:

1. Lecture, "Narcotic Poisoning," T. Clark Miller, Massillon.
 2. Lecture, "Operations for Removal of Kidney,"
Dr. Dudley P. Allen, Cleveland.
 3. Essay, "Treatment of Epilepsy," Dr. Henry S. Upson.
- Discussion, "Summer Complaints,"
Drs. W. A. Knowlton, Cleveland; J. T. Marchand, Canton.

REPORT OF CASES.

Dr. N. S. Everhard, Wadsworth,	Dr. E. J. March, Cleveland,
Dr. E. A. Montenyohl, Akron,	Dr. T. H. Brannan, Canal Dover,
Dr. W. S. Hough, Cuyahoga Falls,	Dr. P. S. Greenamyer, Orrville.
J. H. SMILER, Secretary.	A. B. CAMPBELL, President.

The Cleveland members entertained the Union Medical Association of Northeastern Ohio at its meeting, August 9, with a lunch which was served at noon in the Medical Library Building. The meeting of this association was the first medical gathering at the new library, and many more will soon follow. In October there will be a formal opening of the library with suitable ceremonies, and a grand occasion is anticipated.

Medical books are solicited for use in the library, and two fine collections have already been donated by Drs. Handerson and Webber, in addition to the numerous small donations. Books have been bought by the library association, and altogether they make a fine nucleus for what is to come. The building is finely calculated for a medical club house as well as for library purposes.

Death of Dr. Wm. Pepper. In the death of Dr. Pepper the entire medical profession of the United States loses one of its ablest supporters and a representative, world-renowned. Dr. Pepper was born in Philadelphia, Pa., August 22, 1843, and his father before him was a man of unusual prominence in medical circles. He graduated from the University of Pennsylvania at the age of nineteen and took the degree of doctor of medicine at the age of twenty-three. At the age of twenty-five he became a professor of the university, where he has held different chairs with great distinction.

It is stated that his donations to the university have amounted to hundreds of thousands of dollars, and through his efforts, facilities for higher education have been added to the university in the form of post-graduate courses of study.

Dr. Pepper is well known as the author of "Pepper's System of Medicine" and through his other numerous writings and contributions to the literature of medicine.

The death of Dr. Pepper was very sudden and unex-

pected, and occurred in California while on a tour in search of rest and recuperation. Angina pectoris is assigned as the cause of his demise.

The Purification of Santiago. "Whatever may truthfully be placed to the discredit of Gen. Ben. Butler during his military rule of New Orleans, it will always be remembered to his credit that he found the city dirty and left it clean; he found it the chosen home of yellow fever and he banished the pestilence. He showed the way and successive municipal administrations have walked in it ever since, to the great gain of the city in health, reputation and prosperity. What was done in New Orleans under the rigor of military administration can be done in Santiago through similar authority, and probably with less harshness. Santiago is unspeakably filthy, not simply as the result of war conditions, but from generations, centuries of neglect of the most ordinary sanitary precautions."—*Cleveland Plain Dealer*.

A Case for Investigation. The transport Seneca arrived at this port (New York) on July 20, with nearly one hundred sick and wounded from Santiago on board, among whom were fourteen men with a suspicious fever. The ship was in a filthy condition, short of food and water, without any medical or other surgical supplies or instruments, not even dressings for the wounds or a single clinical thermometer. In one case an abscess was opened with the blade of a jack knife, no scalpel being obtainable. When the captain was ordered to take the sick soldiers he protested that there were no conveniences or even necessities for them on the ship, but his objections were overruled by some one at Siboney. Who that some one was is a proper subject for investigation by the military authorities, and when found his punishment should be such as to deter others in command from like brutality. The affair was a disgrace to the army and the country, and as many foreign military attaches were on board the Seneca, our shame will be published to the world.—*Medical Record*, July 23.

Santiago de Cuba has been visited only twice in the past ten years with an epidemic of yellow fever.—*The Medical Age*, July 25.

Veracity in Medical Practice. A few very interesting comments upon this subject appear in the July number of

the *Charlotte Medical Journal*, of North Carolina, quotations from which are taken, as follows:

"The remarks made on the subject of heart failure suggest brief consideration of truth-telling in medicine. It is indeed worthy of extended treatment, but time and space at present forbid. . . .

"Truth is good enough for the other fellow, and people want all of it which concerns him, and as little as possible for themselves, provided it be of a damaging sort." For example, in reference to a diagnosis, it is often seriously impolitic for a physician to "call a spade a spade" when questioned by anxious friends. If cornered he must say something, and it is more than he dares to name syphilis or delirium tremens. A learned Latin term will not serve in most cases, and a bold, unblushing falsehood is the easiest path out of the difficulty. To say that a patient is only drunk, when found insensible, gives mortal offence to relatives, while they are rather gratified with a diagnosis of poisoning by opium, if vigorous measures of treatment be resorted to. . . . The doctor who tells the truth in these instances is sure to come off with damaged reputation, and probably loses his fee besides, while the pliant liar is the gainer in both respects. This is uttered from actual experience in cases where the writer was supplanted by practitioners of more worldly wisdom. . . . In choice of conduct between truthful and untruthful dealings with people it is mainly a question of self-respect or cupidity on the part of the practitioner, and every one must judge for himself."

Post-Graduate Medical Schools. At the regular meeting of the Alameda County Medical Society the following resolutions were adopted:

WHEREAS, It having come to the knowledge of this association that the post-graduate medical schools of Chicago, New York and Philadelphia are permitting the matriculation of irregular practitioners of medicine; therefore be it

Resolved, That this association voices its denunciation of this lax practice as subversive of the distinction heretofore rightly made between regular and irregular practitioners of medicine.

As regular students have been denied advanced standing in regular student bodies, we are further

Resolved, That the permission granted them after graduation of matriculation in regular post-graduate schools tends to discourage the standard heretofore obtaining in our regular colleges,

Resolved, That this association point out the injustice done regular practitioners in permitting the matriculation of irregulars in post-graduate

schools, as they are there drilled in practical work, in manual technique, without regard to scientific requirements; and they are, in some instances, thus enabled to compete successfully in private practice with men who were obliged to reach a higher standard of scientific attainment before being granted diplomas, and who have not had the leisure or the money to supplement graduate with post-graduate study.

Resolved, That it is the hope of this association that this matter receive the attention of other medical societies, and of the profession in general, to the end that so strong a feeling may be formed against this abuse that the governing bodies of the offending schools may be moved to correct it.

Oakland, Cal., June 14, 1898.

E. J. OVEREND, M. D.,

S. H. BUTEAU, M. D.,

Committee.

—*Journal American Med. Ass'n.*

The Patent on Antitoxin. The announcement that Professor Behring has been granted a patent as the inventor of diphtheria antitoxin will be received by the medical profession with feelings of keen disappointment. The profession of this country has always sternly discountenanced any attempt on the part of its members to make scientific achievements opportunities of personal profit. Such discoveries as the medical profession have made have been fully and freely donated to the service of suffering humanity. Professor Behring's claim to be the exclusive inventor of antitoxin not only indicates a spirit of commercialism which does its possessor no credit, but it displays a disposition to assume credit for the labors of others and to make of these an occasion of personal gain which can only indicate a high degree of moral perversity.

Professor Behring claims as his invention: 1. A process "of producing diphtheria antitoxin, which consists in inoculating horses or other animals capable of being infected with diphtheria with repeated doses of diphtheria poison or living diphtheria bacilli of gradually increasing quantity and strength so as to immunize them and form in the blood a counter-poison for destroying the poison secreted by said bacilli, drawing off the blood from said animals, separating the serum from the blood corpuscles, and concentrating the former for use substantially as set forth.

"2. As a new substance, diphtheria antitoxin, consisting of the concentrated serum of the blood of animals treated with diphtheria poison and having the characteristic of immunizing test animals against infection with

diphtheria, and curing them when artificially infected with diphtheria, said serum containing a counter-poison having the property of destroying the poison secreted by the diphtheria bacilli substantially as set forth."

It is almost superfluous to point out to any well-informed reader that Behring's claim to have done this is as preposterous as it is unjust. The principles upon which immunization to diphtheria was finally achieved were of gradual growth, the outcome of researches by thousands of untiring workers. The foundation of the work was undoubtedly laid by Pasteur in his method of immunizing against chicken cholera and anthrax. So long ago as 1887 Sewall immunized pigeons against the poison of rattlesnakes. He says, with genuine modesty, his work was undertaken with the hope that it might form a worthy contribution to the theory of prophylaxis, and it was a most worthy contribution. In 1887, Roux and Chamberland immunized animals against malignant edema with sterilized anthrax cultures. In 1890, the same year in which Behring and Kitasato published their results in immunizing animals against diphtheria and tetanus, Fraenkel published his results in diphtheria after treating animals by weakened germs and filtered cultures. In the clinical uses of the serum, Aronson's name must not be forgotten. His serum was first used in the Children's Hospital at Berlin in 1894. The serum of Roux had been used in one of the hospitals of Paris a month earlier than Aronson's in Germany. Emerich and Aronson both dispute the priority of Behring, and the French Academy of Sciences awarded their prize for antitoxin jointly to Behring and Roux, a fact which very clearly denotes the difficulty of estimating priority of merit in a scientific struggle in which the numerous competitors were so equally distinguished.

The principle which lies at the foundation of the invention of diphtheria antitoxin, and that which underlies all serum therapeutics, is that the blood of immune animals can be used in the treatment of others. Behring did not discover this principle, and in its application he was undoubtedly anticipated by the Japanese workers. If to any single man must be ascribed the distinction of being the inventor and discoverer of the beneficent principle of immunization, the honor belongs to the immortal Pasteur.

The manufacture of antitoxin has been carried out for many years in England, France, Switzerland, Italy,

Russia, and Japan, and in these countries no one has had the temerity to attempt to control exclusively its manufacture. In this country it is made by five boards of health and by several manufacturing firms. In this country alone has an attempt been made to monopolize its production, it being admitted that elsewhere the claims of any patentee are inadmissible.

If Professor Behring admits any merit in the work of his predecessors and contemporaries, his claim to be the exclusive inventor of diphtheria antitoxin is in contravention of all the ethics of a scientist's career. His claim is an offence against common morality. Had Simpson patented chloroform anesthesia, or had Lister patented antiseptic surgery, the world would have had two selfish empirics, and lost two medical heroes. If Behring, by the righteous judgment of mankind, can be adjudged sole and undisputed inventor of antitoxin, he has a place in the Temple of Fame for achieving the most beneficent discovery of modern times. It remains to be seen whether the temptation to be rich will overcome his ambition to be great, and whether for a tinsel crown he will barter a diadem of everlasting renown.—*Editorial, The Medical Age.*

A Glorious Distinction Flung Away for a Paltry Mess of Pottage.—Behring's Patent and Asserted Monopoly of Diphtheria Antitoxin. As powerful and profound as is the tendency of war to demoralize the national character and to inflame the most brutal passions of individuals, it carries in its train of curses and sorrows at least one benefit of inestimable profit to society. War causes mankind to revise its standard of human values. In war we learn what we are too prone to forget in peace — that the proper measure of a man's worth and weight in human society is not his ability to accumulate money, not his power to outstrip his fellow men in the race for position or success, but, wholly and exclusively, his capacity for disinterested and generous service to his kind. All that is devoted, all the latent enthusiasms of the human breast, all the noble resources of self-sacrifice and fortitude, which glorify manhood, unite in times of war to declare that life is cheap but honor dear, and that the only career worth following is that which leaves its mark for good on the community, the nation or the race.

Every man who is not a confiding fool or a credulous dupe knows that these things are apt to be forgotten in

the lazy, luxurious and selfish days of peace. Removed from the strenuous call of duty, danger and patriotism, the average man lapses into a mood that is fatal to every generous ideal of disinterested service to others: small, petty, self-seeking motives soon assert themselves; the demands of the higher life are habitually ignored; and the pursuits of the money-making and dollar-saving machine are resumed in utter forgetfulness of every purpose which can impart substance and validity to our lives.

From this censure should be justly exempted one class of men whose heroism in war is equalled only by their devotion in peace; who, at least in a large minority of cases, spend noble and laborious lives in combating disease, in ministering to the afflicted, in suppressing pestilence, in fronting with serene composure the hardships, dangers and fatigues of the medical practitioner. These men form the brightest ornaments of the human race, and in observing the marked contrast between their helpful lives and the besotted selfishness of many on whom they lavish an unrewarded toil, one cannot help wishing that there were some means of isolating and propagating the generous strain and then using it to enrich our deteriorated blood!

To their eternal praise be it further remembered that the choicer spirits of the medical profession have in all ages maintained and perpetuated a high and fine conception of the duty which the physician owes to his own dignity, to his calling, and to his pupils and to the community. They have realized keenly that disinterested, *unpaid, unbought* service on behalf of others is the only source of true distinction; that the real leaders of mankind are its unrequited servants; and that he who demands wages, profit, adequate pay for his work, must be content to sacrifice fame, reputation, influence. So, too, the man who has been paid for his brain or his blood remains forever the cheap mercenary. *He has been paid*; he has received his price; and he must not murmur when he is dismissed into the limbo of the hireling, unthanked, unhonored, unremembered!

It is this noble spirit which animates the code of medical ethics. Here is the only creed whose claim to professional salvation commands recognition—a creed which enjoins both the manners of the gentleman and the generosity of the philanthropist—a creed which embodies the highest conception of professional dignity and

honor—a creed which has been born of, and which has in turn begotten, all that is generous and worthy and inspiring in professional life—a creed which is alone capable of resisting the lowering, cheapening and degrading forces that threaten to transform Medicine into a trade.

Acting in the spirit of this creed, medical investigators have rarely felt justified in withholding from the great body of their colleagues the fruits of their researches. As they have partaken freely of the common fund of knowledge formed from the contributions of their predecessors, so they have felt constrained to enrich this common fund with their own legacy to posterity. A magnificent heritage has thus accumulated; and every land cherishes with pride, with gratitude and with affectionate veneration its bright muster-roll of departed spirits who gave without stint the best treasures and the choicest fruits of their toil.

Happily, this high tradition is yet a potent force amongst American practitioners, hence great will be the shock, profound the regret, when it is learned that no less a man than Emil Behring has sought to create for himself and his commercial agents a monopoly of diphtheria antitoxin; that not content with the fame and glory of his researches, or with the credit justly attaching to his share in establishing serum-therapy, he made application in January, 1895, for a United States patent on diphtheria antitoxin; that this patent was *five times refused* on the most cogent and substantial grounds, and in simple justice to the long line of bacteriological investigators who had clearly contributed to the results which Behring sought to monopolize; that after the lapse of three years, and after five distinct refusals, a patent was granted in June, 1898, by the Board of Appeals in Washington on the sole and avowed consideration that Behring's work had helped to reduce the diphtheria mortality; and that now the manufacturers of the Behring serum, his assignees known as the *Höchst Farbwerke*, have served notice of their monopoly on the leading American manufacturers, with menace of suit if the German monopoly be not respected.

On the behavior of the *Farbwerke* (*vormals Meister, Lucius & Brüning*) we have no comment to make: they have acted in accordance with their rights. They are a commercial house and pretend to no higher motives than those of the average business man. Patents on medic-

inal substances, monopolies, exploitation of the American public to the full extent permitted by our criminally indulgent laws—these things are mere matters of business in eyes so long accustomed to that ignoble scramble for patents and monopolies, which stains and besmirches the recent annals of German science. The Germans affect to despise the sordid motives and the frantic dollar-chase of the Americans; “Amerikanismus” is a German term of reproach; but in no land and in no degenerate age have scientific men been more prone than to-day in Germany to throw professional dignity and professional duty to the winds, joining in the wild pursuit of monopolies and dollars as frankly and cynically as any American “promoter.” If we Americans have been the teachers, the Germans have proved apt pupils; and they are now abundantly qualified to instruct their preceptors.

But from this whole disgusting and paltry rapacity a few German scientists had thus far held aloof. Rudolph Virchow is one of them. Emil Behring was another. Until recently Behring belonged to that noble band of chosen spirits whose names are handed down from generation to generation as the benefactors of mankind. What is he to-day? With sorrow we answer: the cheap and mercenary monopolist who tarnishes for money the luster of his scientific fame; the fit companion of those who originated antipyrin, phenacetine, salol—and *received their price*; the Esau of German science who flings away for a beggarly mess of pottage his claim to a glorious immortality, and an ethical standing which, though it cannot be weighed or measured or gauged, or expressed in dollars and cents, should be as precious to its possessor as a woman's chastity or a man's honor; nay, more—and mark this well—the greedy and unscrupulous appropriator of other men's researches; the spurious claimant of reward for work done in large measure by Pasteur, Roux, Sewell, Fraenkel, Foa, Bonome, Kitasato, Wernicke, Aronson, Hericourt, Richet, Emmerich, Ogata, Jasuhara, Tizzoni, Cattani, Ehrlich and many others.*

But though Professor Behring has seen fit to descend to the level of monopolists and promoters, he has reckoned without his host and he may yet vainly seek his reward. Not a court in the United States will uphold such a preposterous patent; the claims of his minions will be disputed and fought to the last trench; and in the

*See chapter on “Acquired Immunity,” Sternberg's “Immunity and Serum Therapy.”

sequel he may find that there is a limit both to the exploitation of American patent laws, and the appropriation of credit for other men's work.

Meantime, be it remembered to our shame as Americans, that in Germany the very claim for such a patent would be scouted and repelled. The laws of Germany and France withhold all patents on foods and medicines, save on processes of manufacture, and in this instance Behring could not possibly secure at home what he has been granted in the United States. In Germany he accepts the situation and makes the best of the existing competition; in America he would suppress all competition and remain undisputed master of the field! Is it not high time to bring some organized effort to bear on Congress for a change in the patent laws? Is it not a scandal and a shame that foreigners should enjoy in America monopolies and concessions which are denied them at home? Consider the oppressive extortion to which this has given rise. Remember phenacetine, sulphonal, antipyrin, salol—marketed here at prices outrageously excessive. Remember that not an ounce of these products may be legally purchased in Canada and imported into the United States *duty-paid*. Is there no limit to American patience? How long shall we continue to tolerate the foreigner's extortion—how long will he fatten on the monopolies which American laws create for him?—*Editorial, the Bulletin of Pharmacy.*

Formaldehyde Disinfection of Rooms, Books, Papers, Money and Letters. The present war with Spain increases the risk of spreading several diseases, as for instance measles, by the bringing together of men in camp from all parts of the country; typhoid fever, by the difficulty of supplying them with water not contaminated by leachings from excreta; small-pox, which has been present in localities through which our soldiers pass; yellow fever, which has its home in Havana, and which has already broken out (June 13, 1898) at Fort McHenry, Miss. Some of these diseases are readily transported through the mails, and possibly by infected money. Small-pox may be spread to friends at home by soldiers who are themselves protected by vaccination. For these reasons the convenient disinfection of mails, single letters and other articles may at any moment be very desirable. Recently a new disinfectant has come into notice which promises to be a very

convenient article for the better protection of life and health. Accordingly this brief circular is issued.

Formaldehyde is a gas formed by the partial oxidation of wood alcohol. Its use is very greatly facilitated by having it combined with water, and in a known definite proportion, so that the quantity used may be certain and definitely known. Its solution in water is called formaldehyde, formol, formal, and formalin. Formalin is a trade-mark name, and under that name the solution therefore may cost more than under the name of formaldehyde, or formol, or formal. Under any of these names the solution should and generally does contain 40 per cent. of formaldehyde. (It is sold now for about 50 cents a pound.)

Disinfection of Rooms and Contents.—Except in the case of letters, books, etc., mentioned further on, a simple and efficient method of disinfecting rooms and their contents, which is known to be effective when infected with diphtheria, and which, although not to be relied upon to disinfect the germs of consumption except when the germs are wet, is probably effective in the case of small-pox, scarlet fever, typhoid fever, yellow fever, measles and most diseases the germs of which do not form spores, is to use the solution of formaldehyde, which can be purchased at any drug store, under the name of formaldehyde, formol, formal, or formalin.

Five ounces of the 40 per cent. solution will, under favorable conditions, disinfect a room only 10 feet square and 10 feet high (containing 1,000 cubic feet of air space); most rooms are larger than this, and will require proportionately more of the disinfectant solution, at the rate of at least five fluid ounces for each thousand cubic feet of air space. And if any of the vapor can escape from the room allowance must be made, as also if spontaneous evaporation is the only source of the vapor.

For the disinfection to be thorough the infected articles should be subjected to the rapidly produced and strong vapor of the formaldehyde for several hours. All openings from the room must first be tightly closed; clothing, bedding, etc., should be hung up and spread out in the room as much as possible. The solution should then be rapidly distilled into the room through the key-hole by means of the still, as directed in "Teachers' Bulletin, No. 3", issued by the Michigan State Board of Health; or it can be sprinkled on sheets which have *previously* been hung over lines in the room. This can be done rapidly

and well by holding up the corner of the sheet and sprinkling the solution on from a small garden sprinkler. The person *must necessarily leave the room at once*, and keep it tightly closed for 20 hours. If the formaldehyde is not rapidly distilled into the room, but is evaporated from sheets, an additional quantity should be used, for the reason mentioned further on in this circular.

Disinfection of Mails, Books, Letters, Money and Papers.

This same solution can be used for the disinfection of the mails, for infected books, letters, papers, etc., but for this purpose an increased quantity in proportion to space should be used, as follows:

Make a tight box having a close-fitting lid, and with a capacity sufficient for the amount of mail to be disinfected. Sprinkle the formol, formal, or formalin on a loosely folded cloth, absorbent cotton or mineral wool, from which it may rapidly evaporate, and use the solution in quantity sufficient to be a disinfectant in that sized box,—namely, at the rate of 3.2 ounces for each cubic foot of air space in the box. A box two feet square and two feet high (containing eight cubic feet), would probably hold the contents of one mail pouch. For a box of this size 25½ ounces of the formaldehyde solution should be used. Possibly much less than this may, under some circumstances, be sufficient; but by the spontaneous evaporation some of the formaldehyde sometimes polymerizes—changes form—when it becomes comparatively inert, or at least slow to give off the vapor; it is, therefore, important to make allowance for this whenever spontaneous evaporation of the solution of formaldehyde is depended upon.

Formaldehyde will not readily pass through paper, therefore envelopes sealed tightly must have perforations made in them; and leaves of books should be separated, the books resting on their open edges, or on end so that the weight of one part will not press the leaves together. Galvanized wire screens may be used on which to spread out letters and papers. (Formaldehyde rusts iron but does not injure other metals.)

For the disinfection of only one or a few letters, a small cigar box can be used by placing a few folds of muslin in the bottom of the box, sprinkling one and a half fluid drams of the formaldehyde solution over the muslin, and placing the letters in the box, fastening the lid down tightly, wrapping the box thoroughly in several layers of paper, and leaving for at least five hours. For

the disinfection of books, letters and papers where every leaf cannot be separated, the quantity of formaldehyde solution should be at the rate of at least 1 part by measure of formalin to 300 parts of air space, — 1 c. c. of formalin to 300 c. c. or less of air space.

Office of the Secretary of the State Board of Health, }
Lansing, Mich., July, 1898. }

The Twenty-fourth Annual Meeting of the Mississippi Valley Medical Association will be held at Nashville, Tenn., October 11-14, under the Presidency of Dr. John Young Brown, of St. Louis, Mo.

This association is second in size only to the American Medical Association, and has done most excellent scientific work in the past. The annual addresses will be made by Dr. Jas. T. Whittaker, of Cincinnati, on Medicine, and by Dr. Geo. Ben Johnson, of Richmond, Va., on Surgery. The mere mention of the names of these gentlemen establishes the fact that the association will hear two scholarly and scientific addresses.

Nashville is a most excellent convention city and is well equipped with hotels, and with the record of the meeting in Louisville in 1897 as an example, the local profession under the leadership of Dr. Duncan Eve as chairman of the committee of arrangements has prepared to have a better meeting.

Already titles of papers are being received. These should be sent to the secretary, Dr. Henry E. Tuley, 111 West Kentucky street, Louisville, Ky., as early as possible, to insure a good place upon the program. Reduced rates on all railroads will be granted on the certificate plan.

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Original Articles.

THE RATIONAL CARE OF THE EYES OF INFANTS.*

BY DR. ROBERT SATTLER, CINCINNATI, O.

INTRODUCTION.

The general care which the newly-born should receive and which includes attention to the eyes, is so well understood, so simple and so easily rendered by intelligent attendants, that it must appear superfluous to devote to it even the briefest reference.

Among the self-styled and graduated midwives, however, and even among physicians, there are many who regard as fanciful and exaggerated the warnings concerning the dangerous sequences of ocular lesions of the new-born, resulting from careless and inefficient management.

To such persons, suggestions which come from those of large special experience as to painstaking cleanliness or the imperative necessity of preventive measures, seem wholly useless. It is mainly on account of the defiant attitude of this unintelligent class that it is necessary to call attention to these matters.

It is of lesser significance whether we are converts to

* Read before the Ohio State Pediatric Society, Columbus, O., May 3, 1898.

the suggestions of Credé, and assume with him and others that an infection of the eyes of an infant is possible in every case during parturition, and that its only preventive is the use of an antiseptic, or of a two per cent solution of nitrate of silver. Nor is it important whether we regard this plan of treatment as applicable in those cases only in private practice in which the history of an excessive vaginal discharge was present before delivery, or whether its application is to be confined to those cases in particular which are met with in hospital practice, infirmaries or other places of refuge for illegitimate births.

Certain it is that formerly this disease of the newly-born furnished the cause for a large percentage of cases among the inmates of foreign and American institutions for the education of the blind. Equally certain it is, and supported by crushing evidence, that ever since more painstaking care was practiced in the cleansing of the eyes at or immediately after birth — without or with the use of astringent or antiseptic solutions — the spread of one of the most disastrous affections of the eyes was effectually checked; and, in those cases in which prompt treatment was resorted to, the inflammatory disturbance was more effectually and speedily modified.

The attitude of this unintelligent contingent is, as already stated, one of defiance to the teaching of specialists and progressive obstetricians. To the credit of the profession, however, it must be stated that this class contains from year to year a smaller number of physicians. The persons mentioned argue, or assume, that inflamed eyes at birth, or during the first few days or weeks, are not dangerous and require no other treatment than the rigid exclusion of light and air, bathing with weak infusions of indifferent teas, breast-milk, or the liberal use of saliva from the mother or nurse,—and, occasionally, the local instillation of the mother's urine, etc.

It is furthermore contended that this treatment is generally successful, and numerous cases are cited in which, after weeks of the most profuse suppuration, the eyes recovered without serious, and sometimes without

any damage. That recovery ensued is not wonderful, but that it came about in spite of this most irrational and reckless course is indeed so. It is true that a large percentage of these cases terminate favorably; it is also true, however, that a smaller percentage end disastrously. And, what is worse, it must be admitted by those of us who see these sad cases when it is too late, that the disastrous consequences could have been prevented by timely interference of the right kind.

Extensive observation and experience prove that every inflammatory disturbance of the eyes of infants occurring at birth or shortly afterward, in view of the probable and possible disastrous sequences (including serious damage to sight), merits immediate and thorough attention and the adoption of the best preventive and curative measures. It is an act of criminal negligence to allow such cases to remain huddled up in shawls away from the light and air, and take for granted that all is well without making a personal examination of the eyes. Aided by a good light, with the head of the little patient placed between the knees of the physician, and his clumsy or adept fingers assisted by the use of a lid-elevator, a better examination of the inflamed structures can be made, and a more satisfactory opinion concerning the actual state of the eyes can be given.

There is no disease more amenable to treatment than blenorrhœa neonatorum, none that responds more promptly to the proper remedies used in the right way, at the right time, and re-enforced by directions carried out by a painstaking and faithful nurse.

For these reasons, and for others to be mentioned, a physician who is indifferent to the real dangers and who refuses to avail himself of the opportunity which is afforded in every case to relieve or modify favorably the progress of the disturbance, justly deserves the most stinging blame and censure. To avert careless negligence on the part of midwives, self-styled monthly nurses, aided by the senseless indifference of some practitioners, and to ward off countless repetitions of the

baneful results and unnecessary mistakes of the past, the most stringent legislation only can avail.

To this introduction of a subject which for many years has claimed my interest and attention as a specialist and teacher, the suggestion is added that every physician, after a safe delivery, with the same conscientiousness that he gives his personal inspection to the umbilical cord and other matters, should also examine the eyes of the newly-born and never trust unquestionably to the statements of the mother or attendants concerning them.

THE CARE OF THE EYES OF INFANTS AT BIRTH.

In every instance, whether amidst favorable surroundings or the reverse, the most stringent cleanliness must be enjoined.

Should the eyes show evidences of disturbance at birth, a word of warning should be sounded concerning the dangers from contagion to the attendants and other members of the family. This admonition never comes amiss and often aids in enforcing greater vigilance over the ordinarily lax rules of cleanliness.

In addition, attention should be directed to the fact — abundantly established — that infection of the eyes and a serious inflammation may take place days after birth. In a limited number of cases the exciting cause may be traced to the uncleanly hands of the attendants or mother, soiled with lochial or other virulent discharge. Furthermore, it must be remembered that infection does not invariably arise during parturition, but may even antedate this and occur in utero.

As to the treatment of special cases, the following general rules suggest themselves.

In private cases, in which the history of antecedent vaginal disturbance is negative, and in which the surroundings are favorable, all that is necessary is rigid cleanliness and the immediate washing with one of the many antiseptic solutions, or with simply sterilized water. To make this treatment effectual the child's head should be secured between the knees of the physician or nurse

and the eyes carefully sponged with pledgets of cotton, dipped in solutions of boric acid, borax, carbolic acid, and sulphocarbolate of zinc. Or, a solution of biborate of soda (gr. x ad 3 I), Panas-fluid, or Van Swieten's solution can be flushed into the cul-de-sac with dropper or "undine." After this only the ordinary rules of cleanliness need be observed.

In all maternity or lying-in wards of public hospitals, homes for foundlings and infirmaries; all places of refuge for such a large number of women with illegitimate offspring—and in which promiscuity in sexual intercourse (the recognized and potent factor for venereal disease) can be assumed,—preventive measures should be made imperative in every case. In brief, in these cases as well as in all cases in private practice in which a vaginal discharge is present, the method of Credé, reinforced even by the earlier-practiced methods of vaginal prophylaxis before delivery, should be employed immediately; the one before, and the other at the time of delivery.

In the instillation of the remedy resorted to for antiseptic purposes or for the neutralization of a possible infectious material during parturition, caution must be exercised. It is preferable for an inexperienced person not to drop the two per cent. solution of nitrate of silver into the eye, for fear that the remedy comes directly in contact with the cornea, or that unnecessary abrasion of the surface follows in careless efforts to open the lids of a crying and struggling infant. A better way is to evert the lids and apply the solution with a soft, clean camel's hair brush to the exposed conjunctival surfaces, the solution being then forced into the fornices or cul-de-sacs; after this, by the aid of sterilized water or a salt solution, the eyes can be flushed free of any excess or superfluous portion of the fluid. This treatment should be followed by cold applications, and bathing with weak antiseptic washes as long as necessary.

The application should in most cases be made without delay after delivery, and in some cases even before the cord is cut. If this plan is followed, violent reaction

need not be looked for and is among the most uncommon experiences.

That the instillation in some cases produces a violent reaction is undeniable. My own experience has familiarized me with a number of cases in which violent traumatism was excited, and in one case the use of a solution of nitrate of silver by the attending physician proved disastrous in one eye, the other fortunately escaping. But these isolated instances are exceedingly insignificant when compared with the incalculable good which the method has accomplished, in spite of all the indifference shown to it by many physicians and by others in attendance on parturient women.

On several occasions I have been consulted by intelligent parents who, having heard or read of the Credé method, were impressed with the opinion that they, or, rather, the attending physician, had been negligent in not advising the method, and that their child had been exposed to danger which could have been effectually avoided. An explanation of the supposed or actual causes for the ocular disturbance (that, in most cases, if not a specific, at least a virulent genito-urinary disturbance on the part of the mother must be assumed to exist) is generally sufficient to quiet unnecessary fears. In one case an over-anxious parent, into the eyes of whose child nitrate of silver had been dropped with a resulting violent reaction, for which my services were sought, put the question to me, "Do you practice this method on your own children?" I was forced to reply that I did not — and should not; nor did I advise or practice more than rigid asepsis, aided by the flushing and bathing with some of the bland solutions to be mentioned — in children born to parents who commanded the attention of a skilled obstetrician and lived amidst favorable surroundings.

THE CARE OF THE EYES OF INFANTS IMMEDIATELY AFTER BIRTH.

Formerly it was thought that the room of the lying-in woman must be dark, mainly to shield the sensitive

eyes of the infant from imaginary dangers. At the present day it is recognized that light in moderation and a plentiful supply of air are essential to the well-being of both mother and child.

There certainly is no great need for light. There is little or less need, however, for its rigid exclusion. At this early period an infant's eyes are influenced only by too much or too little light; and even then it is only the comfort of the child that is affected. The commonly accepted belief among the uninformed that inflamed eyes result from exposure to bright light, has long since been proved false and unwarranted. On the other hand, rigid exclusion from air and excessive warmth may induce inflammatory disturbance, owing to the bundling up and the senseless care resorted to in guarding against imaginary fears.

During the first few days after birth, it is not uncommon that the mucous surfaces of the eyes and upper respiratory tract, like the skin, show evidences of inflammation produced by atmospheric causes; and it is the rule, rather than otherwise, to find slight conjunctival irritation with excess of mucous which accumulates at the outer and inner canthus and dries among the shafts of the lashes. This calls for little or no treatment except more systematic cleansing of the eyes with pledgets of absorbent cotton, dipped in sterilized water, weak salt, boric acid, borax solutions. It will in most cases disappear even without the use of these bland washes, with simple bathing with warm water. It is a wise expedient if prophylactic measures have been resorted to, to combat the resulting traumatic inflammation by the use of these indifferent antiseptic washes for several days or until the irritation subsides.

Should more pronounced symptoms, and especially a flaky, straw-colored discharge, with redness and swelling of the lids develop during the first three hours before the expiration of the third day, it can be assumed that infection during parturition has resulted.

Inspection of the eyes by the attending physician is now

imperative. No one is justified in assuming that all that is necessary is some stronger astringent entrusted to the nurse, together with systematic bathing and cleansing. Now if ever is the time for the adoption of remedial measures,—prompt local or topical applications made *by the physician*. These may influence at once the future course of the inflammation and avert danger. Unfortunately, this opportunity is generally lost, mainly owing to the indifference of the physician or the attendants. The result is that a purulent blennorrheal inflammation, with all its vicious consequences, is permitted to come about.

Among the many antiseptic remedies for flushing and bathing the eyes may be mentioned solutions of chlorine water, corrosive sublimate, biniodide of mercury, borax, boracic acid, carbolic acid, sulphocarbolate of zinc, Panas, Van Swieten's, and formalin. Among collyria, alum, chloride acetate, zinc sulphate, corrosive sublimate, sulphate of hydrastia in variable strength of solution, are the remedies preferred. For topical application used by the physician once a day with every possible care, nitrate of silver is acknowledged the most prompt and serviceable, and justly entitled to preference among the many other remedies which have been tried and, mostly, have been found wanting. The silver is used in strong solution, and some even prefer—especially in Germany—the stick of lunar caustic. It must be carefully washed away or partially neutralized by the bathing with a weak salt solution.

If complication of the cornea has resulted—which daily inspection, assisted by a lid-elevator, to avoid unnecessary pressure on the globe, will disclose—the treatment must be modified and surgery resorted to as a supplementary measure, depending upon special indications in certain cases.

CONCLUSIONS.

This subject suggests, because of its progressive advance, important questions.

If we add, as we must, our own testimony to the

worth and merit of the prophylactic methods first suggested and practiced by Credé (a German obstetrician, whose name has been thereby honored), shall we urge its enforcement in all cases, and assume that the danger of infection is present in every case of parturition?

Shall the preventive methods, because of the good they unquestionably accomplish in lying-in wards of general hospitals, maternity hospitals, infirmaries, and amidst the ignorant and poverty-stricken classes, also be resorted to in private practice among the better classes who command the services of skilled and progressive practitioners, and live among the most favorable home surroundings?

Shall a physician who fails to adopt the practice of prevention among his private patients be regarded derelict in his duty for exposing his patient to the possible danger of a blennorheal inflammation of the eyes?

On the other hand, we may ask, "Shall the prophylactic method on account of the violent traumatism that it excites in some cases, or because it is resorted to in a careless manner by an inexperienced person, be considered with prejudice, referred to as dangerous, or be entirely abandoned?

Furthermore, since we can only assume the possibility of infection in the largest number of births, especially in private practice, are we justified in giving discomfort and exciting perhaps a violent reaction, or even a destructive inflammation by its use in unskilled hands — simply to err on the side of safety?

My experience dates back to a period shortly after the method of Credé received recognition in this country. I commenced the use of this prophylaxis during my service at the Cincinnati Hospital and put it to the test whenever my opinion was asked. During the years which followed I became convinced of its efficacy as the most successful preventive.

My experience leads me to say that among the ignorant and poverty-stricken classes, and among women in maternity wards of hospitals, etc. (the place of refuge for so many with whom promiscuity of sexual intercourse is

the rule rather than the exception, and venereal or vaginal disease common), it is the only safeguard and should be practiced without exception.

In private practice, in which the physician has a right to suspect a vaginal discharge, or is told of its presence, or has other knowledge of a genito-urinary disturbance, or is informed or knows that a blennorrheal inflammation occurred after former births,—the preventive plan of treatment should be advised as an imperative act of expediency. On the other hand, in private practice among favorable surroundings and good health on the part of the mother, it will devolve upon the physician's judgment and the attitude of the parent whether the method is to be practiced or not.

Notwithstanding the fact that I know from personal experience that violent traumatic inflammation can be excited, I should never hesitate to resort to this method myself nor counsel against its use by others, well knowing that instillations made by skillful hands and with necessary precaution can only excite, even at the worst, a passing disturbance if no good is accomplished. At the same time, having repeatedly seen the harm that was accomplished by its careless and reckless use, I cannot give my unqualified endorsement in favor of its invariable practice. But this objection, it is evident, is directed against the abuse of the preventive method and does not apply to its proper and careful use.

DISCUSSION.

DR. BLAKE: I am sorry I was not present to hear all of this paper. What I have heard has covered the ground so thoroughly and exhaustively that there is not much further for me to say. I believe that by the use of the method described such disturbances can be avoided. I also believe that, under the conditions to which the essayist has referred, if there has been carelessness an irritation can be aroused, and if the surroundings are of the unhygienic sort, the eyes may take on some form of infection later. An irritation once being aroused, infection may

very easily take place from the use of impure water, or cloths, or whatever may be used in washing the baby's eyes. At the same time, if the irritation is aroused from the use of silver, the inflammation will not be of an infectious character unless that is subsequently added. If the physician will see that only sterile water is used in cleansing and that other proper precautions are taken, I do not think he will endanger the eyes. Of course we all know there is more than one cause for blindness, but none so efficient as infection during parturition. Physicians should come to some conclusion as to proper prevention and other means to be adopted. The tendency is to simply follow out directions. If the physician does not stop to weigh all the conditions, and simply drops in the medicine and goes away and leaves the case, expecting it to follow its own course without further care from him, bad results are apt to follow and the case will have to be turned over to a specialist. Thus he will never adopt a method, or if he thinks he does, he will only imagine he is adopting it and will not follow it very long. He should learn the nature of the complication and have in his own mind a clear idea of the means which he will take to control it.

DR. REED: From force of habit I cannot hear a paper on the eyes read without dropping into the discussion. This is a subject on which Dr. Sattler's practice and mine come together. While I am not in charge of the obstetrical wards at the Cincinnati Hospital, I do exercise supervision over them. This method of prophylaxis has been adopted with good results. In my ward the nurses and, more generally, the internes, are intrusted with these applications of a two per cent. solution of nitrate of silver. Since this service has been under my observation, the past two years, I do not know of a single disastrous result. This fact of itself would suggest a reasonable immunity from disastrous sequences attributable to nitrate of silver. I confess, this was my first familiarity with this work, as I do no obstetrical practice myself. The first time I was brought in contact with this class of work I

watched the application, and was gratified to find that we enjoyed almost absolute immunity from that infection, and that the traumatic result was not realized. I wish to offer this testimony to the efficiency of this man's treatment.

I recently had a little experience that should be of benefit to the practitioner who encounters these cases. A practitioner of the old regime, who gives but little attention to the eyes in the new-born, attended the case. He went back the next day and the mother was getting along very well; said he would not come back again unless the nurse sent for him; paid no attention to the eyes of the child. A week later another practitioner was called in, and he discovered a destructive inflammatory condition in the eyes. The child was taken to a specialist who confirmed the diagnosis. The child came out minus one eye, and with the other damaged. There is now pending a suit for malpractice against the first practitioner, who did not look after the eyes.

The conviction that this is preventable is well spread among the laity, and they are holding doctors to account for these complications. From speculation it has become practice.

DR. MOREHOUSE: During the reading of this excellent paper it occurred to me, as a general practitioner, that vaginal disinfection would be in order. If routine instillation into the eye of the infant should be followed, why not follow routine disinfection of the canal so far as possible. Infection in utero was referred to in the paper, but this point of infection must be very remote, if it ever occurs. The question arises, why should we not produce, as far as possible, thorough disinfection of the vaginal canal, by swabbing it out with strong solutions of nitrate of silver?

DR. LAWRENCE: I do not wish to discuss the paper, for I do not consider myself in a position to do so intelligently; but I wish to verify the work as done by Dr. Reed. In the maternity department of a city hospital there are a number of these cases every year, and conse-

quently a greater liability to ophthalmia neonatorum than in private practice. Dr. Frame has instituted the nitrate of silver solution, and for the past nine or ten months it has been used with very gratifying results. I am sorry he is not here to tell of it. In a number of cases there has been specific infection of the mother, and the child has escaped. The doctor called my attention to it, and I am glad I have been permitted to notice it.

DR. HANSON: In a prolonged experience I have seen about nine hundred obstetrical cases, and I have never instilled the solution into a child's eyes after birth, except in a very few cases. My experience with infected eyes immediately following birth, so far, has been that this work is entirely unnecessary. I believe I have seen but one case in nine hundred of gonorrheal infection of the eyes. I have seen some cases I attributed to other things, soap in the baby's eyes, etc. Women have very imperfect methods of handling a child after birth. Another thing we should bear in mind, gonorrhea becomes latent, and with treatment will disappear in the vaginal canal. When a woman comes to the period of gestation she is not likely to be infected. I believe this theory of gonorrheal infection is greatly overdone.

DR. PETTIT: I think Dr. Hanson's cases must be a better class than we have. I had a woman about to be delivered. I found it difficult to reach all the recesses in the vagina, but by the use of antiseptic solutions, and then nitrate of silver, I had no trouble.

DR. SATTLER, in conclusion: I am much pleased that this paper has excited the interest it has. There have been a number of interesting points referred to. First, points concerning the question of prophylaxis, vaginal and ocular. The older method, the vaginal, was practiced long before the stamping out method was thought of. It is almost impossible to bring about the best vaginal prophylaxis, and it is this that led the obstetrician to try this other method. It is undeniable that the obstetrician is the man most concerned with the disastrous results of the disease, and the suggestion came from him and not from

the specialist, the oculist. This gives greater force to the argument. In spite of vaginal prophylaxis the disease has spread. A large number of institutions for the blind were built for cases who are blind because of this disease. The infrequency of infection, before or after birth, referred to by the doctor, is probably due to the fact that the doctor has had an excellent class of patients to look after, or else his patients consulted other physicians afterwards. Many do not consult physicians. The doctor says, use some antiseptic solution; they say, the doctor has not helped the case, we will call in another doctor.

This is one of the most dangerous diseases of the eyes of infants, but we must admit we have most excellent means of trying both vaginal and ocular treatment. Now as to the best method, I have in mind two families. One mother gave birth to three children. The first child had a violent attack of neonatorum. She came a few weeks before the birth of the next child, and asked if anything could be done to prevent the trouble with this child. I wrote the physician to adopt the most rigid prophylactic measures. He used silver nitrate to within a few hours of birth. In spite of this the child had a most violent attack. She gave birth to a third child. The same plan was adopted, but it had neonatorum in spite of the treatment. Another mother had two children. The same plan of vaginal and ocular prophylaxis was adopted. There was violent inflammation in both cases, but it was controlled. I mention these cases to show the method is not perfect, but it is the best. We know we can do more to prevent it than in most diseases. These are points that cannot be gainsaid.

Another point is as to traumatism in the use of nitrate of silver. The use has become general abroad, and I hope it will become general in this country. But the doctor must not be careless in its use. A practitioner has known countless cases in which no harm resulted. He thinks all will be well in case he resorts to this method, the dropping of nitrate of silver into the eyes. The remedy is dropped directly on the cornea; an inflammation results.

You ask why I assign the traumatism to the instillation? My reason is this: I was called to see a case within six hours after the instillation. I found the traumatism on the eye. It led me to infer, in fact, forced it upon me, that the remedy was at fault. The use was careless. The physician could not even tell me if it was a two per cent. solution; it might have been 20 or 40 per cent. The trouble resulted from nitrate of silver above the proper strength. These are points that must receive consideration. I have watched its use in the Cincinnati Hospital with interest. I can almost tell from the internes the care they use, whether by instillation or carefully brushing the lids. The head of the child should be secured by the knees of the nurse. Many internes are careless and the reaction is more violent in their cases than under others. It is the rational use of this method I advocate. There is so much in the care of the eyes of infants, and it is for this reason I have called the paper the "rational care." There must be first, cleanliness, and then prophylaxis.

I wish to emphasize that there is only one method, and that not perfect, but it is the best, and in careful hands is attended by the best results.

ACUTE OTITIS MEDIA IN THE EXANTHEMATA.*

BY J. E. BROWN, M. D., COLUMBUS,

Professor of Otology, Ohio Medical University.

Mr. President and Members of the Society:

In response to the kind invitation of the president to present a paper upon some otological subject, it seemed to me that a discussion of the topic indicated in the title of this paper could not be without interest and profit. The management of these cases is never easy, and the problem of treatment is made more difficult by the occurrence of the local disorder when the physician may have

* Read before Ohio State Pediatric Society, at Columbus, Ohio, May 3, 1898.

his energies taxed in meeting the indications in the general disease; yet the responsibility in these cases is just as great, and it is hoped that something may be said herein that will enable the physician to meet it as he should.

The acute specific infectious diseases attended with a cutaneous eruption and denominated the exanthemata all show certain lesions of the mucous surfaces of the upper respiratory tract. The list includes variola, varicella, scarlet fever, measles and rubella; although, possibly, the latter is not entitled to this recognition as a separate disease. Of all the acute infections, these more uniformly than any others, save those in which the seat of invasion and chief lesions are in the upper respiratory tract—as in diphtheria and influenza—are attended by complications in the middle ear. Naturally, measles and scarlet fever are the members of this group that engage our chief attention in practice, and the ones in which the characteristics of the ear lesions should be most carefully studied.

It is not my intention to tax your patience with a long dissertation on the pathology of these complications, but to emphasize anew their importance. Also, to point out what seems a rational method of treatment which, we are sure, too few of our practitioners, busied as they are with other onerous responsibilities, have taken the pains to understand or follow out. Recent literature has supplied such abundant evidence as to the immediate and remote dangers of neglect of these inflammations, that we shall not make this a part of the contents of this paper.

In a general way, middle-ear diseases are classified as acute and chronic, catarrhal and suppurative. These types merge into one another, and especially is it difficult to draw a distinct line between those which we shall call acute catarrhal and acute purulent. The presence of a discharge does not necessarily imply a purulent process. This may be simply muco-purulent and the infection in the middle ear cavity superficial. Should the infection penetrate to the submucosa or should fresh bacterial invasion occur along the path opened up by a perforation in

the membrana tympani, then we should have a purulent process. The term acute otitis media is broad enough to include all of these inflammations regardless of whether they are purulent from their beginning or not.

The prevailing type of otitis occurring in measles is mild. It has been demonstrated in a series of post-mortems (Randolph-Bezold. Archiv. Otol., Vol. XXVI., No. 4) that lesions in the ear are constant manifestations in cases of this disease, where death has occurred from other complications, so that we may consider congestion and moderate simple inflammation of the middle ear as much a part of its ordinary course as that of the buccal and faucial membranes. It is when these lesions become more active and deeper-seated that they are entitled to consideration as complications. The simple congestion and swelling which has arisen coincident with that in the nasal and naso-pharyngeal membrane may be followed by abundant exudation, and thickening of the membrane generally, as evidenced by the appearance of the membrana tympani and ending in suppuration. In other cases these changes in the early stage may be very slight, and not until the cutaneous efflorescence appears do we find them, and then they may be limited almost entirely to the middle ear cavity, severe in character, while the eustachian tube shows no participation in the involvement. Here undoubtedly the lesion is the analogue of the cutaneous eruption.

A protracted subacute or chronic catarrhal process with membranous thickening and adhesions about the ossicles is apt to follow the otitis in measles, unless the case is by treatment put under conditions favorable to recovery.

That otitis in this disease occurs frequently, and is clinically important, was shown to me in the epidemic which has been prevailing in the Ohio Penitentiary, where over two hundred prisoners have been under treatment. In a large number of these, fullness in the ear and moderate deafness was present; while a more acute process, associated with pain, tenderness in some cases extending to the mastoid, perforation of the membrane and a dis-

charge, marked its course in others. In three or four cases the mastoid inflammation was severe enough to cause considerable apprehension and subsided only after treatment directed against it.

Otitis is the most frequent complication developing in the course of scarlatina and belongs to a much more severe type than that occurring in measles. As in the latter, the catarrhal type prevails; so in the former, the suppurative is the one generally manifested. The organism suffers from a more profound systemic invasion; resistance is diminished and infection in the middle ear is not only favored by extension of the inflammation by continuity of tissue up into a closed cavity, but also by way of the lymphatic interspaces in the submucous tissues. In no other disease, save in diphtheria—whose ear complications are of the same nature—do we have such rapid and extensive tissue destruction in the middle ear as in scarlet fever. The suppuration is apt to run a protracted course, and when resolution does occur there are left deep-seated changes in the way of destruction of the membrana tympani and adhesions about the ossicles. Too often there is extensive bone destruction and a chronic purulent process which may gradually erode more and more of the surrounding tissues and finally, perhaps many years later, with or without mastoid inflammation, end in facial paralysis, sinus thrombosis, meningitis or brain abscess. If the general practitioner could but follow the complete history of all these cases he would no longer question the importance which attaches to the treatment of the disease at its inception.

This treatment should be effective and at the same time such as can be carried out by the regular attendant, upon whom falls this responsibility in the great majority of cases, and who should be, save when there are severe complications, as competent to direct it as the so-called specialist. We must bear in mind the etiology and pathology of otitis media, and remember that our duties are to check a local inflammatory process, to prevent or limit destruction of tissue and to prevent fresh infection by

either the eustachian tube or the external auditory meatus, where a perforation is present in the membrana tympani.

As a measure of prophylaxis, as well as of treatment, the regular cleansing of the nasal passages and nasopharynx with a bland alkaline wash is of the first importance. For this purpose there can be used the solution of Seiler's tablets, Dobell's solution, or one made from adding to a pint of tepid water, previously boiled, a teaspoonful of a mixture representing equal parts of bicarbonate of soda, borax and common salt. These can be used in the ordinary hand atomizers. Older children can use in addition the last-named solution as a gargle. In younger children, if the atomizer cannot be used, the soda-borax-salt solution can be gently injected into the nostrils by means of the soft rubber ball syringe. This treatment can be made of further value by following the alkaline cleansing with the camphor-menthol oil spray. It is well known that the exanthemata greatly stimulate the activity of the glands about the throat, and this is particularly true of the pharyngeal tonsil which may already be the seat of adenoid hypertrophy and a factor in the production of the otitis. For this reason the treatment directed to the naso-pharynx should under no circumstances be omitted.

In the use of applications to the ear there is difference of opinion as to whether these should be hot or cold. Except when there is tenderness over the mastoid, and threatened involvement of that structure, I am convinced that our reliance should be placed on heat rather than cold. Dry heat should be tried first, by use of the salt bag or flannel-covered hot water bag. If this does not relieve the pain, intermittent irrigations with sterilized water, as hot as can be *comfortably* borne, should be tried. Calomel for obstipation and aconite for the temperature and pulse when not contradicted by the general condition, form the substance of internal treatment, though at the beginning of the inflammation a single dose of an opiate may be given to obtund the pain. It should not be continued, as

its further use may mask symptoms that ought to be quickly recognized.

Under no circumstances ought anodyne or oily solutions be dropped in the meatus. They foul and block that canal and make fresh infection sure in case rupture of the membrane occurs. At the first indication of ear trouble the meatus should be carefully cleansed by irrigation with a 1-5,000 or 1-2,000 bichlorid, or in the absence of that, a three per cent. boracic acid solution, and carefully dried with sterile cotton mops. A ready method of sterilizing these mops is by passing them through a gas or candle flame. The cotton is scorched by this and its surface rendered sterile. The membrane should be inspected and its vascularity and position noted. In the intervals between irrigations and examinations the canal should be filled loosely with a wick of iodoform gauze, covered at the outer end with a pad of cotton held in place by any convenient method.

Paracentesis of the membrana tympani affords one of the most potent measures for relief from suffering and cutting short the disease where the means already employed have not been successful. In fact, such uniformly good results follow its employment that it is entitled to recognition as a merely routine measure. Whenever we find, in addition to the pain, with or without fever, the evidences of accumulated fluid in the middle ear cavity, as shown by bulging of the membrane, we should not hesitate longer about resorting to paracentesis. The operation is quickly, and, we may say, easily performed, and the physician who goes about it right will seldom meet with opposition from the patient sufficient to thwart the desired end. The operation, while a trivial one, must be done under strict antiseptic precautions, so that no fresh infection can occur through the opening thus made. The canal should be carefully cleansed with the 1-3,000 or 1-2,000 bichlorid solution and mopped dry. The paracentesis should be made under illumination with the head mirror. If the entire membrane is bulging the incision should be in the posterior inferior quadrant, which

probably will be the most prominent portion. If the distention is in the *pars flaccida*, the knife should enter just behind and above the short process of the malleus and the cut be made upward and backward to the periphery. In these cases we usually find the tendency to be toward a severe suppurative process, and it is well to make this incision as free as the circumstances will allow.

I recognize the fact that in many of these cases, owing either to the restlessness of the patient or swelling in the deeper portions of the meatus that it will be difficult, if not impossible, to get a satisfactory view of the drum membrane; neither can one, in every case, map out the topography of that structure, but it will be very rare indeed that one cannot make out whether or not it is inflamed and bulged outwards by retained fluid within the middle ear. Neither can the incision be localized at all times with the precision mentioned above. It should be our duty, however, to always strive for an ideal incision, remembering that any small sized perforation made artificially is preferable to waiting for nature to effect a spontaneous rupture.

After the canal is dried with the cotton mop, a wick of iodoform gauze, extending to the bottom of the canal, is inserted and properly covered with a cotton pad at the outer end of the meatus. By the paracentesis we evacuate the inflammatory exudates which have been poured out into this closed cavity, relieve pressure on the inflamed tissues, quiet the pain, and limit the destructive action of the processes we are combating. No one measure does so much to shorten the disease as this comparatively simple procedure, which should be more generally used by our physicians than it is at present.

From this time on our care should be to change the drainage at regular intervals according to the amount of discharge, and to see that no opportunity for fresh infection is afforded by lack of cleanliness in the canal. If, therefore, this is found to be filling freely with discharge, it is well for the physician himself to flush it with a bichlorid solution and leave proper instruction as to how

this can be done in his absence. In carrying out these details the physician or attendant must take the same precautions as for any aseptic operation. The hands should be freshly cleansed, instruments sterilized and all solutions sterile or antiseptic. Bearing in mind that in all of these middle-ear inflammations, whether catarrhal or suppurative, microbic organisms play the important part in their etiology, one can see that these are the necessary and rational means to effect a prompt cure. A muco-purulent discharge may exist from two or three days to as many weeks, according to the severity of the original inflammation; but the practitioner can rest assured that in cases of otitis media treated in this way he will have far fewer cases showing chronic suppuration, or followed by the unpleasant sequelæ which so often mark the after-history in such cases.

About Politzerization I have said nothing. Concerning this feature of treatment a good deal of fierce discussion is going on at this time. A measure that does much good, it can likewise during the acme of inflammation do much harm. One whose practice deals largely with ear disease will find many of these cases in the early stages of which marked improvement will ensue from inflation. So, again, at a later stage after the intensity of the process begins to subside, good can be done in that way; but the method calls for such discrimination and selection of cases, so that undoubtedly the general practitioner will do best to entirely omit inflation by Politzer's method in his cases of acute otitis media.

DISCUSSION.

DR. HANSON: The best thing, of course, we can do in these cases is to prevent their occurrence. Those cases which occur as the sequel of scarlet fever can be largely prevented. I treat all my severe cases of scarlet fever by a full bath, at a temperature of 90° F., just as I do in typhoid fever. The rule I have used is to give a bath every time the temperature reaches 102°, or when they are nervous and become restless. I leave them in

from eight to twelve minutes, rubbing the surface thoroughly. This rarely needs to be carried on longer than three or four days. It is wonderful how the bath will control the fever. I have records of children with a temperature of 105° to 107° in the rectum, in convulsions and unconscious. They became conscious and conversed with the parents before being taken out of the bath the first time. The results of this treatment in these cases is something wonderful. Sequelæ rarely develop.

DR. CLARK: I feel that this paper is one that ought not to go without discussion. There is one point upon which I wish to lay stress. It is this, about the general practitioner dealing with scarlet fever where there is general depression; everything done to disturb the child is something to regret; even spraying of the nose is often debated by the parent and the physician. I have had a few experiences in cases of this kind. When I have had to assist in the ear treatment I have been impressed that it is worth while, and if one cannot do all he would, he should do all he can and go as far as he can. In a case of scarlet fever we should do as much, and do it rationally, as we can, or as the circumstances will allow. I have one instance in mind. There was suppuration in the cornea and suppuration in the middle-ear. It looked as if we would have one of those pitiable results. It is one of the few cases I have seen treated continuously. In spite of the struggles of the child and the depression, we went at it as though it were not down with scarlet fever. In this case the result was perfect sight and perfect hearing, in spite of perforation. I know how desperate the trouble is and how difficult to treat. We know there is much we cannot do, but, so far as can be done, rational treatment for abscesses of the ear is as much needed as for abscesses elsewhere. The exanthematous disease needs this part of the treatment as much as any other condition in which the ear symptoms are present.

DR. TIMBERMAN: I think the gentleman has given us an able paper. I think the subject has been generally neglected and its importance is not fully understood.

Even the specialists themselves have not been aroused to a full appreciation of the importance of otitis media. As has been stated, it occurs most frequently as the sequel of scarlet fever, diphtheria and measles, and undoubtedly the most virulent form follows scarlet fever, or what the Germans call scarlet diphtheria, in which there seems to be a mixed infection. Those of us who are giving our attention to this specialty feel a mistake is made in not giving early and thorough attention to the treatment of this disease. It is too frequently looked upon as simply inconvenient. In the treatment of these cases it is my rule to warn the parents upon the first visit of the dangers that may occur in the wake of this disease. I try to get a promise that they will turn the case over to me for an indefinite length of time. I feel one of the most prolific causes of the trouble is that we do not give it sufficient attention. There is a most profuse discharge, in the otitis following scarlet fever, and in diphtheria, as a rule, the ear is not cleansed often enough. It should be thoroughly cleansed three or four times a day; the physician should do it twice a day. Cotton should not be used about the ear; gauze will take up the purulent matter easily and well and will act as a free drain from the tympanic cavity. I am opposed to Politzerization. I think there is nearly as much harm done by this method as by letting the disease alone. It is the most abused means we have in the treatment of otitis media.

I must differ from the author of the paper in regard to the treatment of mastoid inflammation by heat in the primary stage of the trouble. I cannot but feel that heat will retard the progress of the disease. I think the ice bag is the one best method we have of treating acute mastoid inflammation. Keep it to the ear continuously until there has been complete subsidence of the disease, or proven that it will not subside, and then make the operation. That should be not later than five, six or seven days after the beginning of the mastoid trouble.

I am confident that the profession are beginning to appreciate these troubles more and more, and it is well

they do. I feel that the paper read is worthy our highest commendation.

DR. BROWN, closing: I am very grateful for the able way in which my paper has been supplemented by the remarks of those who have taken part in the discussion, and I am sure the subject is left before you in a better light for what has been said. My object in bringing the paper before you was to accentuate the fact that otitis media should receive correct treatment at its inception. One often fails later because it has been improperly treated in the beginning. It is a local infection, and our treatment should be based on that theory. We, many of us, know the foul condition of the canal as found at our first examination. We find in the canal, fuel adding to the flame already existing. Our general practitioners should take pains to insist upon rational treatment. Dr. Hanson's remarks are very good. I said it was a measure of prophylaxis in interfering to keep the naso-pharyngeal space free. Keep it clean and it will lessen the number of cases in which this complication occurs.

In regard to the use of Politzerization, Dr. Timberman takes the stand many of our otologists take. It is a reaction against the abuse of that method. We are apt to go to extremes when we have a reaction. An inflation following a thorough cleansing will be a good thing in some cases if we can discriminate and select the cases. I do not believe the doctor understood me in the use of cold. I think the ice bag should go over the mastoid process when there is inflammation there. When there is no mastoid inflammation and no indication that the mastoid is taking part in the inflammatory process, I am convinced the warm applications are best. I think you will find very few patients who will not object to the cold. Warmth brings a feeling of relief. We must remember, in inflammation in the middle-ear, our applications are distant from the seat of inflammation.

I thank you for your kindness and courtesy, and feel gratified if I have left an impression as to the importance of this subject.

THE CARE OF COWS FOR A PRODUCTION OF A SUITABLE FOOD FOR INFANTS.*

BY J. C. CULBERTSON, M. D., CINCINNATI,

Professor of the Principles and Practice of Medicine, Cincinnati College
of Medicine and Surgery.

The value and importance of a wholesome food for infants is not denied by any one, hence the question of its obtainance is a primary one. After the supply of the mother or of a wet nurse comes that of other foods. Intuitively, attention is first directed to that given by the cow as being more in consonance with the demands of nature than other substitutes. In order to reach the best attainable cow's milk, the animal herself becomes a prime factor.

That she should be in a healthy condition will go without saying; that she should be kept in this desirable state will also be conceded without comment. The accomplishing of this proposition is the question before us.

Given a healthy cow or herd of cows, their care involves, first, environment. Stabling for protection from cold and inclement weather is absolutely essential, and the stable floors should be kept in as perfectly clean a condition as daily scrubbing can make them. The walls and ceilings should be rubbed off and down at frequent intervals, the rubbings being followed by coats of white-wash. The lime has a sweet and purifying effect. Cows should be curried and brushed every day, the udder and parts adjacent being carefully attended to in this way. At milking it is a good plan to tie the tail temporarily to one of the cow's legs. This may be done without giving her special annoyance. The purpose of this attention, which is both simple and practical, is to prevent any droppings of dirt in the milk pail. The currying and brushing gives health and tone to the skin by ridding it of loose hairs, scales and foreign matter which may pass under the name of dirt, which if permitted to go into solution in the milk causes a deleterious product, which

* Read before Ohio State Pediatric Society, Columbus, O., May 3, '98.

will undoubtedly exert an evil influence upon the child.

It is well known that a nursing mother, if given certain medicines, will have the reaction of such remedies in her milk. It is also known that certain strong mental expressions, such as grief, anger and other emotional disturbances impart serious ulterior effects to the nursing child. No doubt many cases of severe colic and convulsions are due to this cause. The cow is subject to similar emotional disturbances, and as a natural sequence her milk undergoes such changes as to produce like evil results. Such changes in the physiological condition of the milk may not be told by the microscope, but the stomach of an infant is an organ of extreme sensitiveness. Hence, it may be stated as a truism, that the cow that is selected for a production of milk for infants' food should be one of gentle and kind disposition, she should be petted and fondled, never frightened, angered nor unnecessarily disturbed. This is a factor of the very greatest importance, which is no doubt overlooked in many instances when search is made for a cause in disturbance of nutrition in the infant.

An all-important subject in this relation is the food of the cow. It is well known that certain foods greatly increase the flow of milk; notably is this the case with what are known as distillery slops, which not only increase the flow, but also the amount of butter fat in the milk. For this reason such slops are eagerly sought and paid for by dairymen. That such foods are detrimental to the health of the cow is well known. They cause rise of temperature, which means fever and disturbance of the entire glandular system of the animal. A continuance of such foods very soon causes loss of hair and loss of teeth. The cow is no longer in a physiological condition, and hence gives pathological or diseased milk. The poor brute is, from that time on, obliged to sustain life on that kind of diet. The feeding of such slops is a species of cruelty to animals of the very worst type, and the feeder should be made amenable to the severest laws applicable to such cases. An argument is made that slop feed, when

mixed in certain ratios with dry bran or meal, is not deleterious to the health of the cow. This is not true, unless the proportion of slop be very minute.

The cow's mouth, tongue and peculiar stomach indicates their creation to masticate and digest coarse food, and not slops and spoon victuals. Hence it is that cows thrive and do well when fed on clean hay, and corn on the ear, that is chopped into nubbin sizes. The feeder or dairyman sometimes tries a boiling of his ground corn and making a hot mash for his cows. Such foods are unwholesome and at once produce diarrhoea and feverish conditions similar to those observed in swill feeding. Bran and meal, uncooked, fed with clean hay are wholesome for the cow. One reason that cooked meal is unwholesome for man or beast, is because of an insufficiency of the cooking. To be fit for food, corn meal in the form of mush should be slowly boiled for a period of from four to six hours; such a cooking of meal for the cow would perhaps be a provision of a wholesome food. This is a matter of importance that should be thoroughly investigated and inquired into. Clean pasturage is also an absolute necessity and essential for a production of wholesome milk. Clean, pure water in abundance should also be provided; cows are large consumers of water, and this should not be contaminated, lest the ulterior effect be found in the milk.

To sum up, wholesome physiological milk, fit to feed to infants, must be produced by cows kept in clean environments; cows that are of a kind and gentle disposition, which should be unmolested or emotionally disturbed, and fed on food that is natural to the digestive processes of the cow's alimentary canal, a study of which is of much importance; pure water in great abundance; and, finally, the milker should go to his duties with clean hands and clean pail. A neglect of any of the precautions indicated will surely result disastrously to the child that depends upon cow's milk for its nutrition.

This is a very brief paper upon a very important subject, but which the writer hopes will turn the thoughts of

some to a yet further consideration of some of the possible causes of failure from the use of cow's milk as a food for infants and invalids.

DISCUSSION.

DR. MOREHOUSE: Mr. President, I always like to obey a call to speak, but the lateness of the hour and my attention to other duties has left me unprepared to discuss the paper. We had the subject, in part, before us this afternoon and it was pretty thoroughly discussed. I am glad to have heard from the president that our chief reliance should be placed upon cow's milk, and very little upon artificial foods as we understand that term, when the milk of the mother fails. There was great emphasis placed, this afternoon, upon cleanliness and asepsis in securing milk from the cow, and I think the remarks have been thoroughly gone over. This paper is an additional emphasis on the same line, and I am sure we will carry to our homes a new impetus for our work.

DR. HANSON: When I was a boy I worked on a farm. Farmer boys do not have very clean hands. In milking, the first thing they do is to milk on the hands and wet the teats. When they get dry, a little more is milked on the hands, and the excess drips down into the pail. This is true of many dairies. Members of medical societies talk about these things, but doctors do not milk the cows. If we would go to the farm we might do some good. Cows in stables are very dirty, and more or less feces drop into the milk pail; straw, hair, etc., form a part of the compound. *Clean* milk is the exception, not the rule.

DR. MAYNARD: I was about to say, in support of Dr. Hanson's remarks and in accord with this very interesting paper, that the health board of the little town in which I practice has sent out men to investigate and report through that board to the town, the conditions of the various dairies; the care exercised in milking, feeding and stabling of the cows, and the care of the milk afterward; the cleaning of the cans, etc. It seems that we, as physicians, could at least bring this subject before our people. It is

a powerful incentive to dairymen to keep their dairies in good condition. They do not know what day, or hour of the day, these men will visit them. The health officer is also instructed to test this milk for the amount of cream, proteids, etc. We have found this plan very beneficial in bringing to our door good, clean milk. It is fully up to, and above, the standard. They have taken pains not only to produce, but to have milk that is suitable.

DR. BROWN, on behalf of DR. CULBERTSON, closing: This paper was suggested by the number of dairies in connection with distilleries. The distillers are in the habit of selling slop to the dairymen, and the cows become diseased as the result. As Dr. Hanson has said, physicians are not in the habit of going to the country and seeing the manner of milking cows. The health department of the city has gone into this matter and has insisted upon dairies being moved a considerable distance from the distillery. As I understand it, the slop is only used by the dairymen when it is hot; if not used in that condition the end is not attained.

REPORT OF A CASE OF CIRCUMSCRIBED EMPYEMA.*

BY CHARLES S. HAMILTON, M. D., COLUMBUS, OHIO.

P. L. M., age four years and eight months, of healthy parentage, had measles in February, 1897. He made a slow recovery. During the illness, cough and expectoration were very moderate. He spent the summer of 1897 in the country, and while his general health was good, he was easily tired and did not play as much as the other children of the family. His appetite was fair and he had no cough.

About October 1st he is reported as having taken a cold, which lasted for two weeks. On October 21st he returned to the city looking and feeling well. About

* Read before the Ohio State Pediatric Society, at Columbus, Ohio, May 3, 1898.

November 10th he began to cough again, and two days later he came in from a drive complaining of chilliness, and wheezing audibly. On the 16th he declined his food and was found to have fever, the thermometer showing $104\frac{1}{4}$ degrees by the mouth. The respirations were 36 and the lower lobe of the left lung was dull on percussion, with physical signs of consolidation.

Dr. Coleman saw him at various times from the 19th to the 26th, and will detail the symptoms which the child presented at that period.

The patient made apparently a good recovery. The cough and wheezing disappeared and he seemed comparatively well until January 10, 1898, when he was found to have an evening temperature varying from $99\frac{1}{2}$ to 102 degrees, and the area of dullness under left scapula, which had never quite disappeared, became more pronounced. He lost flesh slowly.

Dr. Coleman examined him again on March 6th and made the diagnosis of empyema, in which the writer concurred on March 11th.

On the 15th, the exploring needle was used, first in the posterior axillary line, about the seventh interspace, with negative results, and finally about the same interspace internal to the angle of the scapula. Some curdy pus was withdrawn and submitted for examination to Dr. J. H. J. Upham. No tubercle bacilli were found. A few days later a segment of the rib was excised in the exact location where the aspirator had been successfully used.

On incising the parietal pleura, however, no pus was found; only dense adhesion of the lung to the chest wall, with some thickening of both pleuræ. The adhesions were widely separated by the exploring finger, and when the operator was almost in despair of finding the pus, it was discovered in a cavity at least $1\frac{1}{2}$ inches above the point where the needle had revealed its apparent presence a few days before. The cavity was of the size of a hen's egg, and contained curdy pus. Its walls were thoroughly curetted, mopped with iodoform gauze, and finally a tube was inserted.

From the time of operation until the present the boy has slowly improved. His appetite is better, he is stronger, but there is still an evening temperature which sometimes reaches 102 degrees. Irrigation of the cavity shows that a bronchial fistula exists, as the fluid excites cough with expectorations of the irrigating fluid. At other times the patient has no cough.

Owing to contraction of the walls of the cavity, the tube was recently withdrawn. No more than 1½ drachms of fluid can now be injected into it.

From the very insidious onset of the disease, as well as the appearance of the pus and of the granulation tissue lining the sinus, I have feared that the process was tuberculous. Yet the improvement which the child has shown leads me to hope for a recovery which, though slow, will yet be complete and permanent.

I have purposely left the description of the physical signs to our president.*

DISCUSSION.

DR. COLEMAN: I cannot refrain from making a few remarks relative to this case. During a pretty long period in which I have been engaged in the practice of medicine, I have devoted quite a great deal of time and attention, as a teacher and also as a practitioner, to this particular class of work. This case presents some features that are of more than ordinary interest to the practitioner as well as the surgeon, and is a case demanding more than ordinary ability, I may say, in the hands of the surgeon; through modesty, as I have been connected with the case, I cannot say on the part of the physician. When one has a case of empyema where there is a decided accumulation of pus, or, in other words, a decided accumulation of liquid in the pleural cavity, it is not difficult of detection. Yet there are more mistakes made in differentiating between that and pneumonia than in any other class of diseases. Having examined one thousand men for the doctor's degree, I feel confident that there is a great defect in that

*NOTE.—June 1, 1898. The boy has shown great improvement in the last few weeks. His evening temperature is now 99°.

particular alone. It arises, first, from a lack of thorough understanding of the parts involved in the differentiation of diseases relative to the thoracic region, and, secondly, from a defective hearing. I am well aware that this class of cases demands years of preparation, but it requires also men to be engaged daily in making thoracic examinations. After I have been away for a time it takes me a number of days to get back into the work and to grasp such cases rapidly and accurately. It is like music; performers who have not played for some time cannot play until they have had time for practice. It is so with us. If you see but two or three cases in a week, it is impossible to keep in touch and discharge your duties accurately as you should. I do not blame men who have a limited amount of work in this class of cases; they cannot make accurate diagnoses unless they have plenty of opportunities in that line.

Now as to this case. I was called to it some time during the winter. On my first examination I said to the father that I was positive there was liquid in the pleural cavity, and perhaps some pneumonia in addition. Now let us go briefly to the point and see why and on what grounds I made my statement. In the first place, when the little patient was divested of clothing, I found a lack of motion of the left scapula. That demands attention. It may be due to some acquired condition, may be due to injury, or may be due to the avocation of the patient. In a child no such thing as avocation is to be taken into consideration. I did not find lack of motion in the scapula on the right side. No bulging of the intrascapular space. I palpated and found vocal fremitus absent in the inferior and central portion of the thoracic cavity on the left side. Now mark you, gentlemen, you cannot depend upon symptoms. It is signs that will lead you aright if you are capable of interpreting them. Symptoms deceive almost constantly. As I stated before, there was absence of vocal fremitus that attracted attention. I found there was flatness from the inferior to the center of that side of the chest. I mean absolute flatness—absence of all pulmonary sound. I passed from there to auscultation. When

I auscultated I found absence of all breath sounds from the inferior to the central portion of the chest. Above that line I found very notable bronchial breathing. I said flatness at the base of the lung on percussion was notable, and by palpation; auscultation indicated, and not before, that there was liquid in the cavity. I made my diagnosis. I said it does not matter what this is, but there is liquid—whether pus or serum I cannot say. I do not think a physician is justified in making a distinction. You simply say there is liquid in that pleural cavity. I said I shall treat it and watch it carefully for a certain period. If we do not get diminution, then we shall adopt further measures. There was fever. The patient grew better, but the fever continued. It ran along some days as high as 101. After three or four weeks I said there is liquid, and in all probability pus. Gentlemen, when you find continued fever, and everything else doing well and some inclination to sweating, then I say look out for septic trouble. You have septicæmia or empyæma to deal with. There is only one thing to do. Open the chest and explore. We would probably have liquid walled off and encapsulated. I summoned Dr. Charles Hamilton to see a case of fracture. He came in while the little patient was in my office. I asked him to make an examination. He found everything as I have related. I said I want this patient operated. The father gave his consent. The child was taken to the hospital.

Now let me stop and say that there are just a few signs, and when they are present you can feel confident you have liquid in the pleural cavity. What are they? Diminished motion of the scapula on that side; absence of vocal fremitus; flatness on percussion. If you have pneumonia you will not have flatness; it is dullness. There are always some little areas in that region containing air. If you are a sharp percussor you will find flatness, not dullness, in empyema. When we went to our auscultation we found absence of all breath sounds. That again, gentlemen, is never found in pneumonia. If you have any form of pneumonia, broncho-pneumonia, chronic

pneumonia, you will yet have remaining bronchial respiration; but when liquid is present all breath sounds are absent. Ninety-five per cent. of such cases have liquid in the pleural cavity. There is but one condition that will give you extreme trouble, chronic pleurisy with extreme thickening of the pleural tissues. Under such circumstances you will have absence of all the signs I have given. To recapitulate, with absence or diminished motion of the scapula, absence of vocal fremitus and of breath sounds, there is liquid in the pleural cavity in 95 per cent. of the cases. I said to the physician before the operation—a thing I would not do to the family—this is pus. We may aspirate, and yet not get pus. The doctor made a second insertion of the needle before he struck it. He then put it under the microscope and determined its character. The case was put upon the table and operated, and it was skillfully and carefully performed. After a long research the doctor said, I am unable to find the pus. I said, doctor, it is there and we should persevere; I know it is there, it cannot be otherwise. He therefore continued his search, and the instrument was passed upward; and, to our great delight, the cheesy pus came oozing out. There was a case of encapsulated or walled off empyema where the liquid portion had been absorbed, leaving the cheesy portion behind. I do not wish to say anything of my own work, but I do wish to congratulate Dr. Hamilton upon one of the most skillful operations any man can do. The patient is convalescing nicely. What would have been the result if we had given up? The patient would have been pale and anæmic, with perhaps tubercular trouble setting in, and he would have reached an untimely end.

I think we should be prepared to make diagnoses in just such cases as this. When you have signs, do not let any scheme of the devil drive you from it and spoil the work that is entrusted to your hands of saving human lives.

DR. HANSON: It occurs to me that this case, in the early stages, instead of being a case of extreme difficulty

in diagnosis, was easy. I do not believe there is a man here who would have missed it. When Dr. Hamilton saw it, after the fluid was absorbed, then it was obscure. I compliment the doctors on sticking to the work until they found what was there.

DR. HAMILTON, closing: I am very glad to have had the opportunity of presenting the child, and to have heard the discussion of the physical signs characteristic of empyema. I can hardly add anything. I would suggest to the president, if it meets with his approval, that the child be disrobed for informal inspection by the members of the society.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

ON THE EFFICIENCY OR INEFFICIENCY OF THE MEDICAL DEPARTMENT OF THE ARMY DURING THE SPANISH- AMERICAN WAR.

This question has been greatly agitating the public mind ever since its interest in strictly military matters was lessened by the cessation of hostilities. Suddenly the attention of the people was attracted to the fact that a few soldiers had been killed. Some more had been wounded and a great many had been taken sick. The newspapers had no more battles to report or prospective battles to speculate upon, and something new and exciting must be found to fill their columns and make the

paper sell. The most fetching theme at hand was the suffering of the soldiers, consequently everything actual must be graphically described in the most glaring colors as they appeared to reporters paid to find sensational subjects commercially valuable to their papers, or as they presented themselves to the disordered fancy of certain specimens of hysterical femininity who would have a war conducted like a five o'clock tea or a Sunday school picnic. Then there were the subtle and powerful elements of politics and personal rivalries which led men to endeavor to charge all the unlucky ventures upon the other fellow and credit all the winning moves to number one. Moreover, the people—the great American people are endowed with a great deal of human nature, and human nature, in modern times, is largely a matter of nerves—not all gray matter—but nervous matter—and the nerves of the people had been quite overwrought by the intense interest in the war; and when the end came—and that rather suddenly—they were just ready to osculate the returning hero or laugh and slobber and break down and cry over something, or somebody. Betwixt it all there ensued the most peculiar period of rejoicings and congratulations, charges and counter charges, of microscopical fault searching, sympathetic generosity and ridiculous blubbering that our times have witnessed. Naturally interest centered upon the medical department. The military leaders, who had been so ready and anxious to take soldiers into a hot climate at the most unhealthy season of the year, were not so ready to bear the responsibility when indignant and sorrowing friends inquired “where are our sons, our husbands, our brothers, our lovers,” or “why are they dead or dying!” Then the military leaders (often with an eye toward election day) looked around and said: “Why, the doctors failed to keep them well. We have doctors whose business it is to see that the army remains in a sound and healthy condition, no matter where we take them or what we do with them.” Now who is to blame? That is the question agitating the whole country and not likely to be settled

in the minds of the people until many bitter words have been spoken, and the nerves of the excitable have had time to quiet down. But perhaps our readers would like to hear an expression of opinion from one who has no political axe to grind, official friends to shield, or enemies to dirk, and has at least endeavored to be fair. Who is to blame for the loss of life and suffering by disease among our troops? For by far the greater part of it, the war having been decided upon, nobody at all is to blame. Hardship and suffering are inseparable from war; and if there is one reason more than any other which accounts for the horror with which people have visited battle-fields, troop-ships, camp-grounds, and army hospitals; and why also grievous complaints have in some instances been heard from the soldiers themselves—particularly the volunteers, it is because they have never before considered or realized the truth just stated—that hardship and suffering are inseparable from war. They did not realize what they were getting into, and found it very different from what they had imagined. A great deal has been said about the lack of medical supplies in the army before Santiago. It cannot be denied that there were large supplies of medicines and dressings carried on the transports with the invading army and that the first failure was on the part of the quartermaster to provide transportation of these supplies to the shore when the troops landed. It is also true that lighters intended for this work were lost at sea by storms, which no human power could prevent—which places this misfortune in the category of the inevitable. As to whether sufficient endeavor was afterward made by the quartermaster's department to bring up the needed medical supplies, we have not witnesses at hand to prove. But it would not be surprising to find in this instance—what we have frequently seen—a great deal of inconvenience arising from having so many departments in the army, requiring endless red tape, complications, misconnections and delay in the execution of business.

As to the adaptability, variety and quality of the

medical outfit itself, no fair-minded person having examined it can give an unfavorable answer. The whole equipment of instruments and appliances, from ambulances and litters down to hypodermic needles, is suited for its purpose, is sufficient in kinds and numbers and up-to-date in every particular. The newest and most improved patterns of instruments and materials for operations and dressings are adopted and furnished by the medical department of the army as soon as they are scientifically established and receive the approval of competent professional judges. The drugs and medicines are the most modern, prepared by the best pharmaceutical manufacturers, the most expensive and even elegant therapeutic agents are furnished, and there is no limit to the quantity which can be had upon requisition, if it is needed.

All this avails nothing if surgeons in the field do not make allowance for distance and possible delays of traffic and order fresh supplies in time, before those on hand have been all expended. And all the forethought and professional knowledge of a medical department in selecting and combining this outfit are useless and impotent if commanders and quartermasters, whose duty it is, do not see to it that the medical outfit is brought to the front and made available at the time of need.

As to the *personnel* of the medical department of the army during this last war, a few words are necessary. It would be useless, and it is unnecessary, to deny that there have been occasional instances of incompetence and shirking, to some degree, on the part of surgeons. The baleful influence of political machinations has been felt in the medical as in the other departments of the army. Political adherents or protégés have sometimes been supplied with all kinds of credentials and recommendations for appointment in the medical service, have in the haste born of urgent demand been accepted upon the honor of their friends, have been sent to the field, and proved incompetent, for one reason or another, to cope with the conditions confronting them. But such instances have been far fewer in proportion than similar instances of in-

competence among officers of staff and line among the volunteers; and we consider that the average of all the medical talent serving in the United States Army during the past summer has been very remarkably high. We believe that old army surgeons who have served in previous wars in this or other countries, and have been cognizant of the conditions prevailing during this last short unpleasantness, will corroborate the statement we have just made.

Obviously, then, it is unfair to attribute to individuals evils which pertain to conditions of society and to natural laws. It is unjust to blame one department of the army for the shortcomings of another department over which the first department has no control, even though its own effectiveness may be dependent upon efficient co-operation. The function of the medical officer is largely advisory, while the authority for carrying out of that advice rests with the officer in command. Soldiers, as we find them, are no more to be trusted to take care of their health than an equal number of schoolboys. It is found in the army as in private practice, that people will come to the doctor for advice and then go and do pretty much as they please, after all. Then if the result is bad—the physician was unsatisfactory—he did not understand the disease, or he did not give the right medicine. And officers, low and high, as well as privates in the ranks are prone to this manifest unfairness.

When all the evidence is in—if all the evidence can be gotten in—and an unbiased judgment is formed,—if an unbiased judgment can be formed, it will not be the medical department of the army which will be found to blame. The fault will be traced to very high sources, and we shall have to cast the mantle of charity over poor, frail human nature, unable to conceive the sacredness of duties involved in conducting a department of this National Government at a time when not only thousands of lives but the destiny of a nation are at stake; or unable to remain unbiased by self-interest or the influence of scheming friends.

In spite of the most hypercritical and sensation-loving investigations that can be instituted, we expect to see the medical profession, as represented in the army, come out with colors flying, conceded to be as scientific, well-managed, and altogether efficient a department as any in the army — and far superior to some which have endeavored to cover their own blunders by casting obloquy upon others.

THE DOCTOR.

The doctor, above all things, is a philanthropist. He may be learned in medicine, naval warfare, or something else. He is not supposed to be wealthy, but cannot stand the trials of poverty. The populace cares not for the ills nor trials of a poverty-stricken physician. He is posing as a philanthropist, while he wears the garb of the needy. Such hypocrisy is disgusting to the sensitive man of means.

The doctor should at all times wear a benevolent countenance and cast a cheering word right and left as he moves about his town. He should understand law, theology and politics, as well as merchandise, mechanics and farming. He should read all of the daily papers, medical journals, scientific publications and popular novels. He should attend church and lodge meetings, go to the theatre, receptions, private functions, base-ball games, horse races, and should be present at all political caucuses and conventions. He should at no time absent himself from medical meetings, nor neglect the Public Library.

The doctor should study Delsarte and Swedish movements, for his physical culture and grace of action; must know how to dance and play whist and other popular evening games. He should never get weary; a tired look indicates a weakness and savors of poverty. His vocabulary should be full, elegant and sparkling, and his clothing should indicate the refinement of a polished gentleman.

The doctor should respond to the calls of the citizens,

night or day, and be great and benevolent enough to see and overlook every moral weakness of his patient. He must understand all of the frailties of man and womankind, and in a spirit of humility must instruct, aid and uplift.

The regular physician should understand the principles, methods and dogmas taught by other schools. He should understand the spiritual workings of Christian science, the mysteries of osteopathy, and the occult influences so largely banked upon by people in high society.

Medical bills should be presented but once a year. They should be moderate and well tempered to the shorn lamb. The doctor must not forget that the practice of medicine is no longer a business. The only object for sending out bills at all, in these modern times, being to shield the diffident from a sense of obligation.

As there are now but a few doctors left, in proportion to the vast field of glory before the profession, is there not a stirring need that medical colleges should be increased in size, number and quality to meet the ever-increasing and boundless demands for high-class medical philanthropy?

C. W. S.

NEUROLOGICAL NOTES.

Kernig's Sign of Cerebro-spinal Meningitis.—Lumbar puncture possesses undoubted and great value in the diagnosis of meningeal inflammation. Yet, at times it is not only not infallible but is positively misleading, as abundant testimony from capable observers show. Since lumbar puncture has become one of the means, and not *the* means, of diagnosis of meningitis, it becomes us to consider, as is always best in medicine, all of the testimony that disordered functions present.

Netter (*Semaine Medical*, June 29, 1898) considers 25 cases of the various varieties of meningitis with reference to the occurrence of Kernig's sign, which seems to be a valuable diagnostic in all forms of meningeal inflammation. Kernig found that when a patient afflicted with meningitis was placed on the back there appeared no con-

tractures of the extremities and all of the joints were free and easy of movement, permitting the usual amount of flexion and extension. If, however, the patient was placed in the sitting posture there appeared not only manifest contractures, but spastic resistance to extension. The contractures were usually in the nether members and produced a flexion of the legs on the thighs and thighs on abdomen, but occasionally the forearms were flexed on the arms.

As a rule the contractured members could not be extended beyond an angle of 90° or 100° . The retraction of the head and rigid back were, in a few cases, markedly increased by the sitting posture.

The symptom was found in a varying degree in 23 out of 25 cases, by Netter. The series embraced 12 cases of cerebro-spinal meningitis, 8 of tubercular meningitis, and 3 of mixed infection cerebro-spinal meningitis (meningococcus of Weichselbaum and tubercle bacillus).

Brain Tumor and Chronic Nephritis.—In a very suggestive article in the *Philadelphia Medical Journal*, February 5, 1898, Burr directs attention to the mimicry of the symptoms and signs of brain-tumor by chronic nephritis. In substance the writer says that localized palsies and Jacksonian epilepsy are not uncommonly due to uræmia without gross lesion of the brain. If those two symptoms alone occurred the diagnostic problem would not be great, but all of the general and most all of the focal symptoms of a brain-tumor may develop during chronic nephritis, and without demonstrable lesion of the brain. Not possessed with a desire to exaggerate the difficulties of diagnosis, yet the writer is certain that many cases of chronic nephritis are mistaken for brain-tumor. The occurrence of one disease does not exclude the other, but when combined may present an insolvable diagnostic problem.

The one-time opinion that choked disk is practically pathognomic of brain-tumor is now known to be false, and most ophthalmologists agree that a condition of the optic disk may be produced by chronic nephritis that the most skilled cannot distinguish from that commonly caused by

brain-tumor. The fact that albumen and casts may be absent from the urine in chronic nephritis for long periods, and that albumen may be persistently present in the urine of people with brain-tumor in whose kidneys there are no lesions, tends but to cloud an already misty problem.

Muscular Paradox in Hysteria.—By the term “muscular paradox,” Aldrich (*Cleveland Med. Gaz.*, May, 1897) refers to the apparent inconsistency in the use of certain muscles often shown in hysteria. Thus a man, while lying in bed can use all of his muscles with quickness and power, may perhaps be unable to use them at all while on his feet. A singular illustration will suffice to show the means used to detect this muscular paradox. Requesting the patient to keep his leg rigidly extended, the examiner grasps the ankle with one hand, while the other is placed in the popliteal space, and the amount of force required to flex is noted. Next, with the hands in the same position as before, but with the leg at an angle of 90° to the thigh, the patient is requested to extend the leg, and the examiner observes the muscular force required to prevent it. Though in these two tests the normal contraction of a single muscle is involved, yet the examiner may find that the resistance necessary to overcome this contraction is in one case perhaps double what it is in the other. Other muscles are to be tested in a similar method. —*Med. News.*

A New Symptom in Peripheral Facial Paralysis.—Bordier and Frankel, in the *Medical Week*, October 1, 1897, relate their observations of a phenomena in facial palsy, the original discovery of which they believe to have made.

Their observations lead them to ascribe to this new symptom both diagnostic and prognostic value.

If a patient with a severe facial paralysis is asked to shut his eyes, it will be found that while the eye on the normal side closes promptly and well, the one on the diseased side presents but a slight narrowing of the palpebral fissure. Now, if the closing effort be continued, the globe of the eye of the affected side will be seen to move first

upward then slightly outward, the eyelid in the meantime finishing its descent according to the degree of the paralysis of the orbicular muscle.

Trial will demonstrate that the patient cannot close the affected eye without this outward and upward movement of the globe; hence, if the patient is looking at some object, he is compelled to remove his gaze before he can close the eye.

The authors ascribe a triple value to the symptom.

1. It occurs only in peripheral disease.
2. The symptom is marked only when reaction of degeneration is complete; hence its presence stamps the paralysis as severe and serious, and in the cases observed, where the orbicular is contracted without the deviation of the globe, the paralysis proved transient and curable.
3. It permits an accurate judgment of the progress of the recovery, since such result is invariably accompanied by a lessening deviation during orbicular contraction.

ALDRICH.

Among Our Exchanges.

Croup forms no exception to the current dictum, that a multiplicity of remedies and procedure in the treatment of any given disease indicates that all treatments are more or less unsatisfactory—usually more so. And it is not at all strange that it should be thus when the stridulous breathing may arise from so many causes, such as mere spasm, edematous infiltration, inflammatory thickening, pseudo-membranous obstruction, diphtheritic or non-diphtheritic, etc. Nevertheless, the cases are not common where it will not be safe for the practitioner to proceed at first, *i. e.*, for an hour or so at least, on the assumption that the case is spasmodic, unless, indeed, the evidence be clear that it is pseudo-membranous or due to edematous infiltration. Failure to respond promptly to proper antispasmodics furnishes a fairly reasonable ground for assuming that the case is probably pseudo-membranous, and for treating it accordingly, while if improvement follow quickly on the exhibition of such remedies, it is hardly probable that the case is of the more serious character. Thus the use of antispasmodics

serves to clear up the diagnosis to a considerable degree. Nitroglycerin, which has been used successfully by some as a mitigant of the paroxysms of *whooping cough*¹ and other spasmodic coughs, is being employed by DR. G. G. MARSHALL, of Wallingford, Vt., in *croup*, and he claims that in his hands it has given better results than any antispasmodic he has hitherto used. For one thing, it is tasteless and there is no resistance on the part of the child to taking it. Again, it does not interfere in any way with the giving of other remedies, such as ipecac, aconite, and the like. The action of trinitrin being temporary as well as prompt, it should be given in small and frequently-repeated doses — doses small enough to guard against a possible idiosyncrasy on the part of the patient, and repeated till relief is obtained, or till the physiological effect of the drug is manifest. Children five to ten months old will bear $\frac{1}{100}$ to $\frac{1}{50}$ of a grain, which may be repeated in from five to ten minutes if no effect be noted. Usually in ten minutes there is marked relief of the dyspnea and improvement in the general appearance of the child, and by continuing the remedy from time to time as indicated, the laryngeal spasm may be kept under control. Sometimes two or three repetitions of the dose are all that is necessary, at other times the remedy must be continued at more or less frequent intervals for two or three days. Even in *pseudo-membranous croup*, the spasmodic element often enters, very largely complicating and intensifying the symptoms. In such cases much relief may be obtained from the nitroglycerin, and we may be able to avoid operative interference while awaiting the slower action of antitoxin. When shall we urge operative interference in croup? That is a question which is likely to confront the practitioner at any time. He must ask the question "ought this patient to be operated now, or can I safely wait?" and the patient must abide the consequences of the answer. It is some 40 years since GERHARDT noticed what he called *inspiratory asystole*, a failure of the pulse during inspiration in cases of threatened asphyxia from croup. This condition, more fully described by VARIOT and called *paradoxical pulse*, is considered by careful clinicians as a positive indication for operation, especially taken in connection with retraction of the xophoid cartilage during inspiration. But in studying the order in which the accessory muscles of in-

¹ *Maritime Med. News*, Nov., '97.

² *Atlantic Med. Weekly*, May 28, '98.

³ *Jour. de Clin. et de Therap. Infant.*, Sept. 16, '97.

spiration become involved in asphyxia from laryngeal stenosis, M. BAYEUX has come upon what would appear to be another important sign—the *sterno-mastoid sign*. He noticed that the accessory muscles are engaged in the following order: First, the trapezius; next, the omohyoid; then, the scalenus anterior; and lastly, precursory to the conditions of asphyxia and preceding them by a few hours, the sterno-mastoid. As these muscles become involved, they manifest an active tension synchronous with and lasting as long as the inspiratory effort. When, therefore, in a case of laryngeal stenosis, the practitioner notices the development of this *sterno-mastoid sign*, and in connection with it, the *inspiratory asystole* of the pulse before mentioned, he should have no hesitation in urging immediate operative interference. In cases already operated these signs denote obstruction of the tube, and if they supervene after the tube has been removed, they indicate that it should be at once re-introduced. After the symptoms have appeared which render operative interference necessary, the question comes, which operation? DR. E. W. SAUNDERS, of St. Louis,⁴ prefers intubation wherever available, for it is a less formidable operation, and, therefore, less often refused by the patient's friends. Nevertheless, if the patient be remote from the physician, accidents to the tube when in place, and recurrence of suffocation after removal, are more to be feared with intubation than with tracheotomy, and if the practitioner be inexperienced in the introduction and removal of the O'Dwyer tube, he will, ordinarily, do better to tracheotomize. There are also particular cases where tracheotomy is the operation of election, irrespective of the familiarity of the practitioner with the two operations. HUGUES, of Paris, has noted that where there is marked laryngeal spasm, patients do badly under intubation, and his observations are confirmed by DR. SAUNDERS. Intubation presupposes the ability on the part of the patient to expel the tracheal mucus through the tube. Where there is a well-marked pseudo-membranous deposit in the trachea, the chances are that the patient will do better under tracheotomy. If when the O'Dwyer tube is introduced there is no reaction, no sharp fit of coughing, we have reason to conclude that the trachea is also involved. The patient's chances will be better if the tube be at once removed and tracheotomy performed. With extensive deposit in

⁴ *St. Louis Med. Gazette*, June, '98.

the fauces, moreover, there is danger that the exfoliated membrane may occlude the head of the tube, causing instant suffocation. Tracheotomy is preferable in such a case. The moribund state also strongly contra-indicates intubation. The mucous membranes feel cold to the guiding finger, and the mere introduction of the gag suffices to put an end to respiratory effort. [DR. GEO. W. CRILE, of this city, has shown that pressure on the lining membrane of the larynx would produce by reflex action a complete suspension of the respiratory functions.] In such a case rapid tracheotomy is indicated, followed, if necessary, by artificial respiration. Whenever, too, stenosis occurs after removal of the O'Dwyer tube—and it may recur within a few minutes or within a day and prove rapidly fatal—tracheotomy should be done and the larynx set at rest. In performing the operation, DR. SAUNDERS prefers the upright position for the patient. Breathing is less interfered with than in the recumbent posture, and the blood flows away from, rather than into the trachea. After transfixing and cutting the fold of skin, the trachea is held with a sharp tenaculum, thereby facilitating the dissection, and when opened, Hodgen's hairpin retractor is used, only DR. SAUNDERS introduces it upward instead of downward—it dilates equally well, and, in addition, it draws the trachea upward and steadies it, thus facilitating manipulation within the trachea in the direction of the lungs, for the removal of any loose false membrane or foreign body. After the trachea is free, respiration established, and oozing has ceased, the tube can be introduced with the greatest ease and the hairpin withdrawn.

We are so accustomed to use cocain as a local anaesthetic that we are inclined to overlook its very important systemic effects, and its value as a remedy in *opium poisoning*. It acts directly on the respiratory center, increasing both the number and depth of the respirations. It quickens heart-action, dilates the pupil, produces wakefulness. It stimulates secretion, except as regards the liver and pancreas, and increases peristalsis. Under its use both the volume and specific gravity of the urine increase. It is, therefore, evident that the physiological antagonism between opium and cocain is much more complete than that between opium and atropine. Bearing these facts in mind, when he was called to see a lady who had taken an ounce of laudanum three hours before, DR. C. W. WILLIAMS, of Minneapolis,⁵ injected with the

⁵ *Northwestern Lancet*, May 15, '98.

customary apomorphin and strychnin a quarter of a grain of cocain hydrochlorate. When the doctor arrived the patient was profoundly narcotized, respiration almost entirely suspended, radial pulse imperceptible, pupils widely dilated, skin covered with a clammy sweat and cyanosed, nails blue, lips and gums blue-black. No vomiting followed the apomorphin and it was repeated in fifteen minutes, but again without effect. In half an hour the quarter-grain of cocain was repeated, with a grain and a half of permanganate of potash in a dram of water. This was repeated again in half an hour, making three-quarters of a grain of cocain in all. Ten minutes after the doctor's arrival, respiration ceased altogether, and artificial respiration was employed for half an hour steadily and then, at intervals, for half an hour more. She recovered consciousness the next day. Experiment has shown that the permanganate acts only to decompose the free opium salts remaining in the stomach. Hypodermically it has no effect, so that the doctor is justified in attributing that recovery chiefly to the physiological antagonism of the *cocain*, artificial respiration serving to maintain life till that antagonism had time to assert itself.

If the baby don't breathe, it isn't best, according to the experience of DR. S. STRINGER, of Brooksville, Fla.,⁶ to be in too much haste to cut the cord or to begin to make violent efforts at artificial respiration. Ordinarily, the asphyxia is the result of tedious labor, and by time the child is delivered the powerful uterine contractions have in most cases already detached the placenta also, and it is apt to be either in the os, or in the vagina, and can be easily delivered at once. Deliver it, clear it of clots, warm water being used preferably, and expose the maternal surface to the air, and oxygenation goes on in the placenta just the same as when it was *in utero*. So long as circulation keeps up through the cord, you need have no fear of the life of the child. Respiration may be delayed, even so long as twenty-five minutes in some cases, but usually in a few moments the livid hue changes to the normal color, respiration begins, the circulation is diverted from the placenta to the lungs, the pulsation in the cord ceases, and then the cord should be tied and severed as in ordinary cases. It looks as though DR. STRINGER's method were based on sound principles, and it may be that its general adoption will enable us to report fewer cases of atelectasis.

L. B. T.

New Books.

ATLAS AND EPITOME OF OPERATIVE SURGERY. By Dr. Otto Zuckerkandl, Privat-docent in the University of Vienna. Authorized translation from the German. Edited by J. Chalmers Dacosta, M. D., Clinical Professor of Surgery in Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital, etc. With 24 colored plates and 217 illustrations in the text. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. \$3.00 net. Dr. W. T. Galbraith, agent, 602 New England Building, Cleveland, Ohio.

Every surgeon, and in fact every doctor who is likely to be called upon for surgical work of any kind, will do well to examine this atlas with a view of having one. A glance at the work will satisfy one of its exceeding utility as a guide for ligations, amputations, location of nerves and blood vessels, manner and direction for making incisions for each amputation, ligation, etc.

The color plates are attractive in appearance, accurate in design and are exceedingly well chosen to illustrate the relation of arteries, veins and nerves at points of the body where ligations are most frequently made.

The illustrations through the volume are standard, and clearly depict the work laid out for a surgeon in making amputations and many other operations upon the body. In connection with each illustration the text describes what is to be done, and gives the name of the operation, this fact alone indicates the refreshing influence to one's memory to be derived by scanning this work. To the student it will be a wonderful aid as a graphic compendium to assist in grasping the facts more fully set forth in text books on the subject.

C. W. S.

CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS. A Practical Treatise on the Diseases of Women and their Treatment by Electricity. Third edition, revised, rewritten, and greatly enlarged. By G. Betton Massey, M. D., Physician to the Gynecic Department of Howard Hospital, Philadelphia; late ~~Electro-Therapeutist~~ to the Infirmary for Nervous Diseases, Philadelphia; Fellow and Ex-President of the American Electro-Therapeutic Association, of the Société Française d'Electrotherapie, of the American Medical Association, etc. Illustrated with twelve full-page original chromo lithographic plates in twelve colors, numerous full-page original half-tone plates of photographs taken from nature, and many other engravings in the text. Royal octavo; 400 pages. Extra cloth, beveled edges, \$3.50 net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia; 117 W. Forty-second St., New York City; 9 Lakeside Building, 218-220 S. Clark St., Chicago, Ill.

While the expense of plant and time involved renders it ordinarily inadvisable for the general practitioner to undergo the outlay necessary to secure a complete electro-therapeutic outfit, he ought nevertheless to be fully posted regarding what electro-therapeutics can do for fibroids, tubal disease, malignant disease, etc., in order that he may properly advise his patients, to the end that intelligent choice may be made as between the electro-therapist and the laparotomist, for a treatment which like electro-therapy can cure without risk of life or mutilation, even if it entail considerable expense of time and trouble is, other things being equal, far preferable to an operation which not only jeopardizes life but necessitates mutilation as well. We can, therefore, heartily recommend this thorough and up-to-date monograph to all who desire to keep themselves posted as to what is actually being done by expert specialists in the way of conservative gynecology by means of electro-therapeutics.

TUCKERMAN.

EGBERT'S HYGIENE AND SANITATION. A Manual of Hygiene and Sanitation. By Seneca Egbert, A. M., M. D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12mo. volume of 360 pages with 63 engravings. Cloth, \$2.25 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This little manual is a concise and convenient statement of what at present may be regarded as settled concerning hygiene and sanitation. It is well illustrated, well indexed, and contains full working directions for determining the purity of air, of water, and for detecting the more common adulterants of foods, etc., making it a handy reference book for a busy man. To those who desire to enter more minutely into the details of the topics treated of in this manual, the bibliographic references scattered through the volume will prove convenient.

TUCKERMAN.

MODERN GYNECOLOGY. A Treatise on Diseases of Women, comprising the results of the latest investigations and treatment in this branch of medical science. By Charles H. Bushong, M. D., Assistant Gynecologist to the Demilt Dispensary, New York; formerly Attending Physician to the Northern Dispensary, New York. Illustrated; second edition enlarged. New York: E. B. Treat & Co.

The gist of the author's reasons for writing this work is contained in the following extract from the introduc-

tion: "The effort of this book is to place before the physician a clear, common sense statement of the symptoms of the various diseases of the female sexual organs; to indicate in detail the methods of treatment that can be applied by him and also to indicate in brief the methods requiring the aid of a specially trained consultant of larger experience." Obviously the work was written for the benefit of the general practitioner and the amount of space used in calling attention to general medical treatment is well worthy of his attention. The greater part of the book is perhaps well suited to his needs, but many defects could be pointed out. Perhaps some of the most conspicuous are the statement that a bi-manual examination is necessary in making a diagnosis except in a few special conditions, that adherent anti-flexions should be straightened with the sound, and the constantly reiterated doctrine of intra-uterine applications in so-called endometritis. The idea that it is possible for any man to tell whether the tubes have a *tendency* to close or not and that this is an indication for curettage is certainly somewhat strained, as is also the implied statement that it is safe for the most experienced to attempt the treatment of diseased and dilated tubes through the uterine cavity. The chapter on hygiene and exercise is good and the illustrations fair. SKEEL.

THE OFFICE TREATMENT OF HEMORRHOIDS, FISTULA, ETC., WITHOUT OPERATION. Together with remarks on the relation of diseases of the rectum to other diseases in both sexes, but especially in women, and the abuse of the operation of colostomy. By Charles B. Kelsey, A. M., M. D., late Professor of Surgery at the New York Post-Graduate Medical School and Hospital; Fellow of the New York Academy of Medicine, the New York County Medical Society, etc. E. R. Pelton, No. 19 East Sixteenth St., New York.

This small work comprises three lectures. The first is a logical argument against the performance of heroic operations for the relief of minor rectal diseases; the second emphasizes the fact that the true specialist must be familiar not only with those organs which his specialty includes, but all related organs as well, and the last is a plea for the performance of total extirpation of the rectum instead of colostomy in cases of severe ulceration and stricture of the lower bowel as well as in cancer not too far advanced. SKEEL.

ATLAS OF SYPHILIS AND THE VENEREAL DISEASES—Including a Brief Treatise on the Pathology and Treatment. By Dr. Franz Mracek, of Vienna. Authorized translation from the German. Edited by L. Bolton Bangs, M. D., Consulting Surgeon to St. Luke's Hospital and the City Hospital, New York; late Professor of Genito-Urinary Surgery and Venereal Diseases, New York Post-Graduate Medical School and Hospital. With 71 colored plates. Price of volume, \$3.50 net. W. B. Saunders, Publishers, Philadelphia. Dr. W. T. Galbraith, agent, 602 New England Building, Cleveland.

An excellent and well selected work, and a thoroughly practical manual for the daily use of the busy physician. It contains seventy-one handsome full-page color plates, each illustrating a clinical case, reported in full upon the page opposite.

Following these plates and clinical cases comes the text, dealing in a concise, thorough and practical manner with the various phases of syphilis and gonorrhoea. The author has shown a strong practical sense in selecting only those diseases which are most frequently seen, and are of the most importance, omitting those rare cases that are only of interest to the specialist. It is a small, well arranged volume, and admirably adapted to its purpose.

G. S. S.

Correspondence.

The following open letter from Miss May Bushey, a professional nurse, well known in Cleveland, and now at Chickamauga, Georgia, will be found of interest to all as a fresh word direct from the camp hospital, where many Ohio soldiers have been cared for.

C. W. S.

CHICKAMAUGA, GA., Sept. 9, 1898.

Dear Mrs. Smith:—

It is certainly time for me to be fulfilling my promise to you of a letter. Now, this is personal, but if Dr. Smith finds anything in it that he considers worth publishing, he has the liberty to do so (as requested).

It is now nearly two months since I came down here, but so much has been accomplished and so many patients have been under treatment and sent home that, counting time by events, it seems much longer. I cannot tell just how many patients have been entered and treated but I do know that full ninety-five per cent. of them have been typhoids. During the early part of the time we used tub

baths to reduce temperature, but recently we have used more ice sponge baths. From my own observation, however, it seems that fewer cases with extremely high temperatures have been brought in in the past three or four weeks than during the weeks preceding. My first night here there were fifty patients brought over from camp. A new ward with forty-four beds was opened and filled, it being nearly midnight when the last patient was brought. One other nurse and a hospital corps boy and myself were put on duty. Orders had been issued by the major in charge that owing to the great number of high-temperature patients in the house, together with a short supply of tubs and nurses, no baths should be given unless the temperature was 103° or more. Even so, we would find, on taking our evening temperatures, that from six to fifteen plunges were due, many of which had to be repeated during the night once or twice. You may have a faint idea of what that meant for three people and one tub. All this, aside from the thousand-and-one other needed things that always come with any sickness, and especially typhoid. After a time we had another man given us for help, but the nights passed with hardly a breathing spell. We were rewarded by seeing a great number of them recover. Many, we felt, we might have saved could we have had the care of them from an earlier date. I suppose this will be a record hospital for its great number of typhoid patients treated. Recently more nurses have been sent and the work is less hard. I feel much pleased that I have been able to keep well, having been on one of the hardest wards in the house and my first month spent on night duty. Have lost nearly twenty pounds, but for the past few days the weather has been cool and, though on night duty again, am feeling fine.

Although Mrs. Hunter, Miss Sommers and I do not work together yet, we find it quite pleasant to be at the same post. We also have two Cleveland doctors here and so form quite a colony. * * *

Have been up to Lookout Mountain twice, once for the trip, once for a three days' rest, and found it a very pleasant outing. It is hard to realize that we are in the midst of such historic scenes as we are. Had I time I would love to give you my story of the views, but ere you finish reading this you will be tired. We are in part of the park, but about three miles from headquarters and regular camping places. It is about thirteen miles from

Chattanooga and in a very beautiful but God-forsaken locality.

Our sleeping accommodations are better by far than I expected, but the food is rather unpalatable many times. Many a longing did I have during the first month, especially for a good square meal, and now I often feel the same, although things have improved. We have hardly felt like asking the D. A. R's for anything for ourselves, but had they thought to send us some good tea, coffee, fresh eggs, etc., they would have been most gratefully received. * *

The soldiers have much sympathy, which is just and proper, although the reality loses some of its glamour for them. However, I am not one bit sorry for coming, and am very glad in every way, so far, that I did. I expected to rough it, and we have. We are not sure what we shall do, but it is quite probable that those who have stood the test of work and climate here the best will be sent to island posts, so you may see me on the way to Havana in the course of time.

I am, very sincerely,

Leiter Hospital.

L. MAY BUSHEV.

MAHOBA, N. W. P., INDIA, }
 July 25, 1898. }

My Dear Dr. Kelley:

We are just four women here, and sometimes for weeks at a time we do not see another white face. Our letters and what comes to us from the home-land seem like visitors from another world. I think I never cared for the United States as I do now, and we read with such interest all the affairs. I know much more about what is going on now in Washington than I did when I was home. I am very well satisfied in India, and will not care to go on to the Philippines. If we do not hurrah for the red, white and blue our hearts are just as loyal, and we keep still because we are on British territory. I have a beautiful American flag that was given me by a friend, but I cannot put it out because I have no British colors to put with it. We have a number of silk ones distributed over our house, inside.

The remedy we used for diarrhea and dysentery is anise, dried ginger, and what the natives call Esoph gole. I have no idea what this is in English or Latin terms.

Another thing we have used for dysentery is the ball fruit. This is simply made into a decoction. Another thing we find quite useful is chirata in malaria — not alone but in connection with quinine.

I must tell you some nonsensical things I have heard recently. I am having four hours of recitation per day just now. Two teachers in Hindi and one in the Urdu language. They are all wise men in Indian letters, but I consider their knowledge of medicine somewhat faulty. My Mohammedan teacher said one day that we breathe through only one nostril at a time — But I must begin with the first. He asked me if I knew *the* mystery, and I said I did not. He said it had been known here for many years. Now I will continue. "We breathe through only one nostril at a time, and change every ten minutes. One is hot and the other is cold. If we breathe through the hot one and drink cold water at the same time, we will get a cold." I said then I presumed if we breathed through the other we would get a fever; but he would not agree to that. This man understands English well and, I think, has a B. A. degree; but you see how the old superstition clings, even when they are educated.

One of the Hindoo teachers said, "A doctor will ask what you ate yesterday. If I can feel the pulse I can tell what you ate yesterday. You must place three fingers on the pulse, and whichever has the strongest beat under it, that will show the disease. If it is the finger nearest the hand, that shows heat, and the seat of the disease is in the liver; if the second one, it shows cold, and the seat of the disease is in the lungs. The third indicates air, and from that come such diseases as Rheumatism."

There is a native doctor in the town in the government hospital, educated of course. I asked the teacher if he treats that way. He replied, "No; he treats as you do."

The other teacher says he has bottles of three colors (red, blue and yellow, perhaps); that he places these filled with water in the sun, and when the water becomes *too hot* (that is the Hindi idiom transferred to the English), it is very valuable. He mentioned only fever in which these are especially useful. This man, too, is educated in English and, unlike the other two, has a very high opinion of himself. Now I must not write more this time, but may have something interesting at another time. These people learn just as easily as we do, but they are *so* superstitious!

With my four hours a day and my practice with letter-writing, etc., do you not think I am about as busy as I was in Cleveland?

Please remember me to Drs. Baker and Dutton.

Very sincerely,

ROSA LEE OXER.

Notes and Comments.

Dr. W. H. Humiston has recently returned from an outing at Alexandria Bay.

Dr. Wm. E. Wirt, Lieutenant U. S. N., will, it is reported, remain in the navy as a permanent officer.

Dr. and Mrs. Hunter Robb, who have been spending several weeks visiting and sightseeing in the West, are soon to return home.

Dr. and Mrs. C. W. Smith, with several other friends, visited the Thousand Islands and made a tour of the lakes, through the Welland Canal, during the month of August.

Dr. and Mrs. C. W. Wooldridge took a week's trip up the lakes this month. It is hoped that the trip will benefit Mrs. Wooldridge, who is convalescing from a long and painful illness.

Dr. C. B. Parker recently made a round through the city of New York, visiting medical friends and the medical institutions of that city. An invitation to operate before the staff at the Cancer Hospital was accepted by the professor, and we have no doubt that the high standard held by Cleveland surgeons was ably maintained. The doctor is a well-known, tactful and successful operator.

Dr. G. W. Crile, of Cleveland, Surgeon-Major of General Garretson's Brigade of Volunteers, was recently promoted to Chief Surgeon of General Henry's Division. He is now in the city. The doctor has seen service at both Cuba and Porto Rico. He is well, is in good spirits, and says that his supplies were abundant near the close of his service but were somewhat scanty at first. "The healing of wounds inflicted by the Mauser bullet is wonderful, no operation being necessary, and no septic condition followed, as a rule."

Dr. Samuel W. Kelley, the Cleveland physician who entered the volunteer army service as a contract surgeon a little over a month ago, has received a high promotion. He was contract surgeon for only a short time and was on duty at Tampa, Fla. His prominence and skill as a physician attracted the attention of the army authorities, and he was appointed a brigade surgeon of volunteers with the rank of major.

On August 22 Major Kelley was assigned to duty at Montauk Point, where he now is. Dr. Kelley's professional standing is high, but he is a very quiet and unostentatious man. He is professor of diseases of children at the College of Physicians and Surgeons.—*Cleveland Leader*.

Dr. F. C. Bunts, Surgeon-Major, is quoted as follows: In speaking of the condition of the camps in the South, Surgeon Bunts positively denied the stories of want and neglect which have been so freely circulating during the past few weeks. He said that he always had at his command all the medicines and appliances that he needed and that the sick men were all well taken care of.

"It was the Florida climate which caused the trouble," said Dr. Bunts. "The rainy season was on and of course fever broke out. At Huntsville, however, we had one of the finest camps I ever saw, and there was little or no sickness. Some such things as milk and the like were at times hard to get, but we managed to secure it by driving through the country. The men we left in the hospitals are all convalescing and will be home shortly. The hospital at Lakeland closes to-morrow and the men there will be sent North. The men at Huntsville will be home soon, too, because all of them are on the road to recovery. We have had five deaths in the regiment."—*Cleveland Plain Dealer*.

The Health Report from Santiago, for September 10, was as follows: Total sick, 524; fever cases, 254; new cases of fever, 39; returned to duty, 105. No deaths.

Sick in Porto Rico. Ponce, September 13, 1898. The number of sick among troops in Porto Rico, 1,886, about 18 per cent.; 177 typhoid, 447 malaria; 1,262 other diseases. Investigation of two deaths at Ponce shows them to be yellow fever, which originated in the quartermasters' hospital. One more case has developed. All troops at Ponce have been removed to camps. General Henry has taken precaution to prevent the disease spreading.—*News and Herald*.

Miss Helen Gould is caring for large numbers of sick soldiers at and near New York City. The transport "Shinnecock" arrived at the port Sept. 12 with 310 sick and convalescent soldiers from Montauk, and it was met by a doctor and a dozen nurses to take charge of over one hundred men, who are to be cared for with others at private expense by this charitable lady of wealth.

A Woman Army Surgeon.—Dr. Anita Newcomb McGee has been appointed acting assistant surgeon in the United States Army and was regularly sworn in on August 29th. She has the rank and pay of a second lieutenant. Dr. McGee is a graduate of the medical department of Columbian University, Washington, in the class of 1892. Since the beginning of the war she has been in charge of the selection of the female nurses for the army.—*Medical Record.*

Note to Contributors.—Original articles, medical news, notes and comments are respectfully solicited from all reliable sources for publication in this journal. Doctors making a change of location are especially requested to note the fact in the GAZETTE.

Contributors are hereby requested to prepare and submit manuscript on or before the first day of the month.—[THE EDITOR.]

At the Next Quarterly Meeting of the Cleveland Medical Society, September 23rd, 1898, Arthur Edwards, M. D., professor of therapeutics in the Northwestern University Medical School, Chicago, Ill., will deliver the address.

The Next Annual Meeting of the American Public Health Association will be held at Ottawa on September 27 to 30, inclusive, 1898. The officers are as follows: President—Dr. C. A. Lindsley, New Haven, Conn.; First Vice-President—Dr. Benjamin Lee, Philadelphia, Pa.; Second Vice-President—Dr. John C. Shrader, Iowa City, Ia.; Secretary—Dr. C. O. Probst, Columbus, O.; Treasurer—Dr. H. D. Holton, Brattleboro, Vt.

The Opening Exercises of the Cleveland College of Physicians and Surgeons will take place in the amphitheatre of the Cleveland General Hospital Wednesday, September 21, at 2 P. M. Prof. Albert Mann, professor of biology at the Ohio Wesleyan University, will deliver the address—subject, "Preconstructed Success." Professor Mann is an able teacher and, what is not so common among scientific teachers, an eloquent and forcible speaker. Rev. Dr. A. J. Lyon, a trustee and treasurer of the University, will also be present.

Mississippi Valley Medical Association.—The following is the preliminary program for the meeting of the Mississippi Valley Medical Association, at Nashville, October 11 to 14, 1898:

B. Sherwood-Dunn, Boston, Mass., Why I have Abandoned the General Practice of Vaginal Hysterectomy; J. A. Stucky, Lexington, Ky., Tonsillitis or Quinsy, Causes and Treatment; H. W. Whitaker, Columbus, O., Pichi; A. Ravogli, Cincinnati, O., A Few Practical Points in the Treatment of Posterior Urethritis; Frank Parsons Norbury, Jacksonville, Ill., The Neuro Hypothesis of Rheumatoid Arthritis; A. M. Osnes, Dayton, O., Diphtheria and its Logical Treatment; F. E. Kelly, La Moille, Ill., Varicocele; F. F. Bryan, Georgetown, Ky., A Plea for Pelvic Peritonitis and Cellulitis; John M. Batten, Pittsburg, Pa., Syphilis; Geo. W. Johnson, Dunning, Ill., Gonangiectomy and Orchidectomy for Hypertrophied Prostate in Old Men; Geo. F. Keiper, Lafayette, Ind., Wounds of the Lachrymal Apparatus, Report of Operation for Restoration of Caniliculi Obliterated by Trautism; Shelby C. Carson, Greensboro, Ala., A Consideration of the Limit to Operative Gynecology; W. H. Humiston, Cleveland, O., The Relations of the Gynecologist and the Neurologist; W. Gaston McFadden, Shelbyville, Ind., Intermingling and Changing of Type in Diseases; William F. Barclay, Pittsburg, Pa., Mercury and Its Action; J. Rilus Eastman, Indianapolis, Ind., The Diagnosis of Gonorrhea in Women; S. E. Milliken, Dallas, Tex., Sub-Periosteal Removal of Caries from the Pelvic Basin with the Report of Cases; Thos. Chas. Martin, Cleveland, O., Complete Inspection of the Rectum by Means of Newer Mechanical Appliances; Geo. D. Kahlo, Indianapolis, Ind., Hydrotherapy in Stomach Diseases; Alex. C. Wiener, Chicago, Ill., Surgical Treatment of Infantile Paralysis; James M. M. Parrot, Kingston, N. C., Supra Pubic Cystotomy vs. Perineal Section; R. C. Pratt, McKensie, Tenn., Report of Cases in Obstetrics with Complications; John L. Jelks, Memphis, Tenn., The Relationship between the Genito-urinary tract and Rectum, with Special Reference to the Female; T. Virgil Hubbard, Atlanta, Ga., How Should We Treat Typhoid Fever; W. W. Taylor, Memphis, Tenn., A Clinical Contribution to Ectopic Gestation; M. Goltman, Memphis, Tenn., Interesting Surgical Cases; I. N. Love, St. Louis, Mo., The Bicycle from the Medical Standpoint; Jos. Price, Philadelphia, Pa., Surgical Treatment of Pus in the Pelvis; Andrew Timberman, Columbus, O., Operations on the Mastoid, When and How Performed; R. A. Bate, Louisville, Ky., Arthritic Diathesis; Chas. W. Aitken, Flemmingsburg, Ky., Diagnostic and Therapeutic Uses of Tuberculin; G. W. Halley, Kansas City, Mo., Some Pathological Conditions of the Ovaries and Adnexa, Causing Pain.

HENRY E. TULEY, *Secretary*.

Preliminary Program of the Fifth Annual Meeting of the American Academy of Railway Surgeons, to be held at the Auditorium, Chicago, Illinois, Wednesday, Thursday and Friday, October 5, 6 and 7, 1898.

First session will open on Wednesday, October 5th, at 10 A. M.—Executive Session (opened to Fellows only). Miscellaneous Business:

Report of Editor. Scientific Session (opened to all those interested). Anaesthesia, R. H. Cowan, M. D., Assistant Chief Surgeon, N. & W. R. R., Radford, Virginia; Traumatic Injuries of Peripheral Nerves, D. S. Fairchild, M. D., Surgeon C. & N. W. R. R., Clinton, Iowa; Injuries of the Genital Organs, Milton Jay, M. D., Chief Surgeon C. & E. I. R. R., Chicago, Illinois.

Second session, Wednesday, October 5th, at 2:30 P. M.—Executive Session (opened to Fellows only). Reading of Minutes of Previous Session; Miscellaneous Business. Scientific Session (opened to those interested). The Radical Cure of Hernia, W. J. Mayo, M. D., Surgeon C. & N. W. R. R., Rochester, Minnesota; Concealed Meningeal Hemorrhage, H. Reineking, M. D., Surgeon C. & N. W. R. R., Sheboygan, Wisconsin; The Interment of Ericsen, W. J. Galbraith, M. D., Omaha, Nebraska.

Third Session, Thursday, October 6th, at 9:30 A. M.—Executive Session (opened to Fellows only). Reading of Minutes of previous session; Report of Secretary and Treasurer; Report of Standing Committees; Registration of Fellows and payment of dues; Consideration and disposal of applications for Fellowship; Miscellaneous business. Scientific Session (opened to all those interested.) Physical Examination for Railway Service, J. F. Pritchard, M. D., District Surgeon C. & N. W. R. R., Manitowoc, Wis.; The Hygiene of Railway Injuries, G. P. Conn, M. D., Chief Surgeon C. & M. R. R., Concord, New Hampshire; Conservatism in Railway Surgery, H. Hatch, M. D., Surgeon C., B. & Q. R. R., Quincy, Illinois.

Fourth session, Thursday, October 6th, at 2:30 P. M.—Executive Session (opened to Fellows only). Reading of Minutes of previous session; Election of officers; Selection of next place of meeting; Miscellaneous business. Scientific Session (opened to all those interested). President's Address—"The Higher the Order of Railway Surgery the Greater the Protection to the Employee, the Passenger and the Company."—R. Harvey Reed, M. D., Assistant Surgeon U. P. R. R., Rock Springs, Wyoming; Convenient First Dressing of Fractures With Samples, E. H. Trickler, M. D., Surgeon T. & O. C. R. R., Cutler, Ohio.

Fifth session, Friday, October 7th, 9:30 A. M.—Executive Session (opened to Fellows only). Reading of minutes; Miscellaneous business. Scientific Session (opened to all those interested). Surgical Treatment of Some Varieties of Disease of the Prostate and Seminal Vesicles, G. E. Benninghoff, M. D., Surgeon W. N. Y. & P. R. R., Bradford, Pennsylvania. The following Fellows of the Academy have promised papers, but up to date have not furnished subjects for the same: A. D. Bevan, M. D., Chicago, Ill.; Allen Staples, M. D., Dubuque, Ia.; LeRoy Dibble, M. D., Kansas City, Mo.; C. K. Cole, M. D., Helena, Mont.; George W. Crile, M. D., Cleveland, O. Executive Session (opened to Fellows only). Reading minutes of previous session; Miscellaneous business; Introduction of President-elect; Adjournment.

D. C. BRYANT, M. D., *Secretary*,

R. HARVEY REED, M. D., *President*,

Omaha, Nebraska.

Rock Springs, Wyoming.

American Association of Obstetricians and Gynecologists.

SECRETARY'S OFFICE, 284 FRANKLIN ST., }
BUFFALO, August 16, 1898. }

The American Association of Obstetricians and Gynecologists will hold its eleventh annual meeting in the banquet hall of the Monongahela House at Pittsburg, Pa., Tuesday, Wednesday and Thursday, September 20, 21 and 22, 1898.

The management of the Monongahela House (which should be addressed on the subject) offers the special rate of \$2.50 to \$4 a day, American plan, to members and guests of the association who attend the meeting. The Monongahela will also provide a splendid room for the meeting.

OUTLINE PROGRAM.—The association will meet in executive session with closed doors on Tuesday, September 20th, at 9:30 A. M., for the election of new Fellows. The open session for the reading of papers will begin at 10 o'clock. Recess for luncheon at 1 o'clock P. M. Afternoon session at 3 o'clock; recess at 5:30 P. M.; evening session at 8 o'clock.

The morning session will begin Wednesday, at 10 o'clock, for the reading of scientific papers. Recess at 1 o'clock. Afternoon session at 3 o'clock. Adjournment at 6 o'clock.

At 6:30 P. M., Wednesday, the executive session will convene for the election of officers, and for such other business as may come before it under the rules.

The morning session will begin Thursday, at 9:30 o'clock, to continue until 1 o'clock P. M., when recess will be taken for luncheon. The afternoon session will be called at 3 o'clock and at 5 o'clock the closing ceremonies will be held. A full attendance is specially requested at the final session.

At 8 o'clock P. M., Wednesday, immediately after the executive session, the annual dinner will be held at the Monongahela House.

The cost for each cover will be \$3.50, which does not include wines. It is estimated that a suitable exhibition of wines will add from \$1 to \$2 to the cost of each cover.

It is particularly desirable that every member who contemplates attending the dinner will notify the chairman of the dinner committee, Dr. W. J. Asdale, 5523 Ellsworth avenue, Pittsburg (postal cards addressed to the secretary are enclosed for the purpose), as far in advance as possible, and likewise designate how many seats he wishes reserved.

The hours named in the foregoing schedule are subject to change by vote of the association on executive council.

PAPERS PROMISED.—1. ———, President's address, Charles A. L. Reed, Cincinnati.

2. ———, Clinton Cushing, San Francisco.

3. Septic Infection of Ovarian Cystoma, Charles Greene Cumston, Boston.

4. Recent Experiences with the Alexander Operation, H. E. Hayd, Buffalo.

5. Nursing in Abdominal Surgery, Joseph Price, Philadelphia.
6. Carcinoma of the Breast, W. F. Westmoreland, Atlanta.
7. Operative Technique for Intraligamentous Ovarian Cystoma, D. Tod Gilliam, Columbus.
8. Organisation of Major Operations in Private Practice, W. G. Macdonald, Albany.
9. Explanation of the Character of the Temperature in Appendicitis, Robert T. Morris, New York.
10. Pathological and Clinical Phases of Gall-stone, A. H. Cordier, Kansas City.
11. Some Facts in Regard to Uterine Fibroids, H. D. Ingraham, Buffalo.
12. Albuminuria Complicating Gynecological Operations, Rufus B. Hall, Cincinnati.
13. Extrauterine Pregnancy, with Specimen; Mature Fetus borne twelve years, W. J. Asdale, Pittsburg.
14. Surgical Treatment of Morbid Conditions Involving the Broad Ligaments, A. P. Clarke, Cambridge.
15. — — —, Walter B. Dorsett, St. Louis.
16. A second paper on the Surgical Treatment of Intussusception in Infants, with Cases, H. Howitt, Guelph, Ont.
17. Relation of Nervous Affections to Diseases of Female Pelvic Organs, B. Sherwood-Dunn, Boston.
18. Ureteral Anastomosis, Geo. H. Noble, Atlanta.
19. The Graver Forms of Nerve Disturbance, due to Organic changes in the Genital Organs, W. H. Humiston, Cleveland.
20. Some of the Complications Following Vaginal Hystero-salpingo-oophorectomy in Pelvic Suppuration, F. Blume, Allegheny.
21. The Question of Intra-abdominal Drainage, Edwin Walker, Evansville.
22. Report of a Case of Double Uterus and Vagina with Pregnancy in one Horn; Excision of Vaginal Septum, F. Blume, Pittsburg.
23. — — —, Carlton C. Frederick, Buffalo.
24. Some Clinical Observations, based on over 100 Abdominal Sections for Ovariectomy, X. O. Werder, Pittsburg.
25. — — —, L. S. McMurtry, Louisville.
26. Remarks on Methods of Hemostasis, with Demonstration, Walter B. Chase, Brooklyn.
27. Past and Present Surgery of the Gall-bladder and Bile Ducts, William H. Myers, Fort Wayne.
28. Treatment of Granular Erosion of the Cervix by Ligature of the Cervical Vessels, D. Tod Gilliam, Columbus.
29. Relation of Rectal to Pelvic Disease and to Nervous Disorders in Women, Joseph M. Mathews, Louisville.
30. Treatment of Endometritis, William A. B. Sellman, Baltimore.
31. — — —, William Warren Potter, Buffalo.
32. Tubercular Peritonitis, J. B. Murphy, Chicago.

CHARLES A. L. REED, *President.*

WILLIAM WARREN POTTER, *Secretary.*

Yellow Jack is Vanquished in Mississippi. Washington, September 12.—Surgeon-General Sternberg has received no advices since Saturday about the reported outbreak of yellow fever among the troops at Porto Rico.

Surgeon-General Wyman, of the Marine Hospital Service, says there is now only one case of yellow fever in Jackson, Miss., and that it is thoroughly isolated. He says that all steps have been taken to stamp out and prevent spread of disease, and that the danger of an epidemic is over.—*Cleveland Press*.

In the Hospitals. How the Sick Soldiers Are Being Cared for in Cleveland. It would be hard to tell just how many sick soldiers there are in the city now, for those who had homes to go to went to them, but the hospitals have had all their arrangements turned upside-down by the large and sudden increase in the number of their patients, made by the soldier boys who have come home worn out by heat and fever and privation.

The Lakeside Hospital has the most—44 members of the Fifth and two boys from the battery. There are 27 men at Huron Street Hospital and two at St. Vincent's.

At Huron Street Hospital everything has been done to make things as pleasant and comfortable for the sick men as possible.

Some of them are in wards on the first floor; a female ward on the second floor has been cleared and given up to them, and others are quartered in rooms 7, 8 and 9, three of the best private rooms in the building.

Most of the men there are from the Fifth, and the sickest are Messrs. Reed, Sanford, Eilert, Martin, Patterson, Kohn and White, but none are said to be in any immediate danger.—*Cleveland Plain Dealer*.

Medical Co-Education. The first session of the Cornell University Medical School will open on Tuesday, October 4th, in the building of the Loomis Laboratory, formerly occupied by the Bellevue Hospital Medical College. These are temporary quarters secured for use during the construction of new buildings. Women are to be admitted as students under the condition that they take the first two years at Ithaca, the home of the college. This is the first of medical co-education and the result will be watched with interest. The fact is of deep moment to women, the progress of women in medicine being clearly marked by this step, which but a few years since would have been considered, if not impossible, at least among the improbabili-

ties. Women in the profession are no longer a probability, but a fact. They have demonstrated their fitness, their ability, and their determination to remain.— *Woman's Medical Journal*.

"The Golden Penny," 190, Strand, London, W. C., under date of August 6, 1898, gives a short piece of advice from *The Lancet*, warning cyclists on the subject of dust. The point of the advice is: Keep your mouth shut and breathe through your nostrils. That innocent-looking dust which you only think unpleasant is dangerous.

Each gramme-weight of it contains *hundreds of millions* of bacteria. Among them are *pathogenic*, that is, disease-producing kinds; microbes of pus, malignant oedema, tetanus, tubercle and septicæmia. But it is found that if one breathes through the nose the microbes seldom pass beyond the entrance to the nasal passages. As a further precaution one is advised, after a dusty ride, to rinse the nasal cavities with a weak and slightly warm solution of some mild antiseptic.

"How about Cleveland dirt and dust?" — A. L. C.

Examination for Admission to the Marine Hospital Service. — A board of officers will be convened at Washington, Wednesday, November 9, 1898, for the purpose of examining candidates for admission to the grade of assistant surgeon in the United States Marine Hospital Service. It is desired that applications for this examination be made before November 1st. Candidates must be between 21 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of the examination: 1, physical; 2, written; 3, oral; 4, clinical. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography by the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and, when practicable, candidates are required to perform surgical operations on the cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the

same order as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service assistant surgeons are entitled to examination for promotions to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and, after due examination, as vacancies occur in that grade. Assistant surgeons receive \$1,600, passed assistant surgeons \$2,000, and surgeons \$2,500 a year. When quarters are not provided, commutation at the rate of \$30, \$40, or \$50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years' service, up to 40 per centum after 20 years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. Further information may be obtained by addressing the supervising surgeon-general, United States Marine Hospital Service, Washington, D. C.—*Medical Record*.



6

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THE
Cleveland Medical Gazette

OCTOBER, 1898.

Original Articles.

**OHIO STATUTES AND DECISIONS RELATING
TO MALPRACTICE.***

BY ALEX. HADDEN,
Attorney-at-Law, Cleveland, Ohio.

The word "Malpractice" seems by custom to have been appropriated by or to the medical profession. It is defined to be bad or unskillful practice in physicians or other professional persons whereby the health of the person is injured.

For the purpose of convenience, and perhaps naturally, malpractice is divided into three kinds: Willful malpractice, negligent malpractice, and ignorant malpractice.

First as to willful malpractice; anything done willfully is done intentionally. An intention to do an injury or cause a loss is an essential element of almost every crime in the calendar of every English speaking people. It would, therefore, seem logical to say that wherever or whenever we find an act embodying or accompanied by an intention to injure another, we are justified in saying

* Read before the Medico-Legal Section of Cuyahoga Co. Med. Soc., Sept. 21, 1898.

that act is or ought to be a crime. In this State, no act can be a crime unless the legislature has seen fit to declare it so. No matter how injurious may be the act, no matter how it may outrage our sense of propriety or justice, the State cannot reach out for and deal with the perpetrator thereof, unless the legislature has seen fit to declare that particular act an offense.

So that a short cut, to find what malpractice is willful, would seem to be an examination of the statutes to see what acts of the physician are made crimes by the law of the State in which we live.

Sec. 6813 of the Revised Statutes of Ohio provides as follows: Whoever, while in a state of intoxication, prescribes or administers any poison, drug, or medicine to another, which endangers the life of such other person, shall be fined not exceeding one hundred dollars, and imprisoned not more than twenty days.

Sec. 6814 provides that whoever prescribes any drug or medicine to another, the true nature and composition of which he does not, if inquired of, truly make known, but avows the same a secret medicine or composition, and thereby endangers the life of such other person, shall be fined not exceeding one hundred dollars, and imprisoned not more than twenty days.

Sec. 6815 provides that whoever, with intent to procure the miscarriage of any woman, prescribes or administers to her any medicine, drug, or substance whatever, or with like intent uses any instrument or means whatever, unless such miscarriage is necessary to preserve her life, or is advised by two physicians to be necessary for that purpose, shall, if the woman either miscarries or dies in consequence thereof, be imprisoned in the penitentiary not more than seven years nor less than one year.

These statutes have been in force, substantially in their present form (except certain matters in the abortion statute to be noticed hereafter), ever since Feb. 27, 1834.

The first of the sections quoted above is aimed at the drunkard physician, and the second at the quack.

You have doubtless noticed that the punishment is insignificant in each case. Possibly it is because of that fact that the reports of our Supreme Court do not disclose a single case involving the construction of either of these sections or any question regarding them. Both of these sections have been upon the statute books for over fifty years, and I have yet to learn of a single prosecution under either of them.

Of the third section, however, this cannot be said. Dr. James F. Baldwin, of Columbus, O., some years ago, was engaged in a systematic war of extermination against abortionists, and as embodying his experience, and also for the purpose of bringing about a change in the holdings of the courts, he rushed into print, and complained quite bitterly of the state of the law as alleged to exist by certain Common Pleas Judges whom he had met in the course of the prosecutions he had been interested in. One of these was the holding that in order to constitute a crime, there must be proof in each case that the drug was administered, or the instrument used after the period of quickening. In other words, to administer drugs or to use an instrument in the case of a pregnant woman before the period of quickening had arrived, was held not to be a violation of the law making such administration of the drugs or use of an instrument a crime.

This holding grew out of a former condition of the statutes, when instead of a single section, as quoted above, the law was embodied in what was known as the act of 1834, and consisted of two sections, which provided as follows:

Section 1. That any physician or other person who shall willfully administer to any pregnant woman any medicine, drug, substance or thing whatever, or shall use any instrument or any means whatever, with intent thereby to procure a miscarriage of any such woman, unless the same shall have been necessary to preserve the life of such woman, or shall have been advised by two doctors to be necessary for that purpose, shall upon conviction be punished by imprisonment in the county

jail not more than one year or by fine not exceeding \$500, or by such fine and imprisonment.

Section 2. That any physician or other person who shall administer to any woman pregnant with a quick child, any medicine, drug, or substance whatever, or shall use or employ any instrument or other means with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, or shall have been advised by two physicians to have been necessary for such purpose, shall, in case of the death of such child or mother in consequence thereof, be deemed guilty of a high misdemeanor, and on conviction thereof shall be imprisoned in the penitentiary not more than seven years nor less than one year.

In place of these two sections we now have only one (Sec. 6815, quoted above), and it will be noticed that it is not essential to the crime that the woman administered to or operated upon should be pregnant.

It is an evidence of progress in the law, that by the present section of the statute the matter has been greatly simplified and this obstacle to conviction furnished by the old statute has been eliminated from all prosecutions for this crime.

This recasting of the statute, however, has not removed all questions regarding the crime of abortion. There is often as much popular feeling aroused against the defendant in an abortion case as in the average murder case. The average person looks upon the physician or midwife, who by the use of drugs or instruments, and for the sole purpose of procuring a miscarriage, has by reason of ignorance or unskillfulness in the use of instruments or drugs, caused the death of a mother, as a cold blooded murderer, although the operator had no intention to cause the death, and performed the operation or administered the drug at the instance of the mother who desired to survive the operation, and whose desire in that behalf was no stronger than the operator's. The popular mind cannot see what element of murder is lacking. It has been held that it is murder as that crime

is defined and described at common law, but the trouble with making it first or second degree murder in Ohio is that the sections of the statute defining those degrees of homicide require that the killing shall be an intentional one, and the burden is upon the State to show by substantial evidence that the accused took the life purposely. In the average case of abortion, this, of course, is impossible, especially where the physician or midwife acts at the solicitation or with the conscious co-operation of the mother.

While it is comparatively easy to make this distinction, it is not so easy to distinguish the case of the death of a mother as the result of an operation or the administering of drugs for the purpose of procuring an abortion, from the crime of manslaughter. It is said repeatedly in the books that manslaughter may exist when the death is caused while the slayer is in the performance of some unlawful act.

In 1876, the Supreme Court of this State had a case before it (*State vs. Barker*, 28 O. S., 583), in which it was charged that the defendant, William B. Barker unlawfully killed one Sarah Lyda while he was in the commission of an unlawful act, and the unlawful act was alleged to have been the using of certain means with intent to procure an abortion, the said Sarah being pregnant with the vitalized embryo of a child. The indictment failed, however, to set forth how the death was caused. In passing upon the case the Court said that had the indictment shown that the death was caused by the means employed to procure the abortion, this would have shown a crime under the abortion act. The defendant could not be indicted for manslaughter (for he had committed another offense), on the principle that a man cannot be indicted for one offense and convicted therefor when he has committed another. The Court said, "had the evidence shown that the death of the woman was occasioned by the administering of drugs or the use of an instrument for procuring abortion, there could have been no conviction for manslaughter because the evidence

showed that another crime had been committed for which there was a separate and specific punishment, and while it is true that the unlawful killing was done while the slayer was in the commission of an unlawful act, still that unlawful act, when producing death, was a distinct offence and must be punished as such." And the Court concluded that the indictment was a good indictment for manslaughter, because it showed that Barker unlawfully killed the said Sarah while he, Barker, was in the commission of an unlawful act, namely, using instruments and administering drugs to destroy a foetus, but it did not allege that these instruments or drugs produced the death. For all that appears, death might have been occasioned while the unlawful act was being committed, but by some accident entirely distinct from and independent of the unlawful act itself. If during the use of the instruments, and the pain occasioned thereby, the struggles of the woman had thrown her out of bed and the fall had killed her, the death, though occasioned while in the commission of the unlawful act, was not occasioned by it.

There is another respect in which both the lay and professional mind confuse the crime of abortion in cases where the mother dies, and the crime of murder, and that is in the matter of the admission of certain kinds of evidence competent in the murder case, and which the average person thinks ought to be competent in the abortion case where the mother's death is the result of the abortion. If Dr. A. killed Mrs. B., not while engaged in procuring an abortion, but by means of a club, and after the infliction of the injury and while she was in the immediate prospect of death and under the sanction of that solemn moment she declares who inflicted the injuries upon her, and when and how they were inflicted, the person hearing the declaration, commonly called "dying declaration," is allowed by the rules of evidence to testify on the trial of Dr. A. just what Mrs. B. said. In 1878, the Supreme Court of Ohio had before it a case (*State vs. Harper*, 35 O. S., 78), in which Harper had been indicted in one count for using an instrument in and upon the

body of one R. C., who was pregnant with the vitalized embryo of a child, with intent then and thereby the vitalized embryo unlawfully to kill and destroy, and that by the use of the instrument for said purpose the vitalized embryo was destroyed; and in another count of the indictment it was alleged that an instrument was used with the same intent and that the death of the said R. C. was thereby caused. On the trial the State sought to introduce the dying declaration of the said R. C. and offered to prove that while she was *in extremis* she told the witness that the defendant had used an instrument in and upon the person of her womb for the purpose of procuring an abortion, in consequence of which she had a miscarriage a few hours before, and that her sickness was wholly caused thereby. The defendant objected to the admission of this declaration of R. C. The Court sustained the objection and excluded the testimony and the defendant was acquitted. It is not hard to imagine the state of the popular mind in that community, and the task of the judge, of explaining to his friends and neighbors why he made such a ruling in that case, was not an easy one; whereas if it had been a case like the one I have supposed above between Dr. A. and Mrs. B., he would have admitted the testimony.

The Supreme Court used very few words in passing upon the question when it came before it. It said the death of R. C. was not the subject of the charge, and the death was alleged only as a consequence of the illegal act charged, which latter was the only subject of the investigation. It further held that the general rule is, that dying declarations are admissible only when the death of the declarant is the subject of the charge, and the circumstances of the death are the subject of the dying declaration; and the Court made the formal holding, that upon indictment for feloniously using an instrument upon the person of a woman who afterwards died, with intent to procure an abortion, the dying declarations of the woman are inadmissible; and supported the holding by respectable authority in other States.

It may be interesting to the medical profession to know in connection with this apparent anomaly in the law, that the prosecuting attorneys' association of this State made a vigorous attempt some 12 years ago to have a statute passed making the dying declarations admissible in a case where the death of a mother followed the operation.

A bill was drawn for that purpose and introduced and referred to the proper committee. The last I heard of it, it had got no further than the committee.

In the trial of a criminal case, in which the State calls as a witness one who acknowledges himself to have been an accomplice of the defendant in the transaction which is the subject matter of the trial, it is the duty of the Court to instruct the jury that the evidence of such accomplice should be very cautiously received and should in all cases be suspiciously scrutinized by the jury (*Noland vs. State*, 19 O., 131), and to advise them not to convict of felony upon the testimony of such accomplice alone without corroboration (*Allen vs. State*, 10 O. S., 288).

In a case in which abortion is charged and the woman who was operated upon survives the experience and is called as a witness on behalf of the State, the question arises, should her testimony be treated by the jury as that of an accomplice? In several States it has been held that the woman in such a case is not an accomplice, but in 1894 the Supreme Court of Ohio held as follows (*State vs. McCoy*, 52 O. S., 160.): "Wherever a woman voluntarily participates with another person, who administers medicine to or uses an instrument upon her for the purpose of procuring a criminal miscarriage upon herself, she falls within the express provision of Section 6804 of the Revised Statutes, which reads, "Whoever aids, abets, or procures another to commit an offense, may be prosecuted and punished as if he was the principal offender," and is thereby subject to indictment and punishment as an aider, abettor, or procurer of the principal offender, and her evidence when she testifies in the case should be regarded as that of an accomplice."

Another question which is of some importance in the prosecution of cases under this statute, is as to the burden of proof of establishing the negative matter, or exceptions contained in the statute.

You will notice that there are two exceptions. The first is where the miscarriage was necessary to save the life of the mother. Whenever that situation exists, the procuring of an abortion is not a violation of the statute. In 1866, the Supreme Court (*Moody vs. the State*, 17th O. S., 110), had before it the question whether it devolved upon the State, as a part of its case, to prove that the producing of the abortion was not necessary to preserve the life of the mother. The trial Court had held that it was not necessary. The Supreme Court held that it was necessary, because the exception, or negative matter in the statute enters into the description of the offense, and is therefore necessarily averred in the indictment, and that in such cases the rule is that some proof must be given to sustain such negative allegations.

The other exception in the statute is where the abortion was advised by two physicians to be necessary to preserve the life of the mother.

As to the burden of proof on this subject there is no square and fair decision by the Supreme Court of this State. There is an intimation, however, in the case last referred to, that were the question before the Court, it would probably hold that proof on this subject would naturally come from the defendant, as, ordinarily, it would be beyond the range of possibility for the State to show that two physicians had not advised the abortion to be necessary to preserve the life of the mother. To state it somewhat differently: If the State offered testimony tending to show that it was not necessary in order to save the life of the mother, this would raise the presumption of fact that no two physicians had given advice that it was necessary, and that presumption would stand until overcome by testimony on the part of the defence.

Several important questions which come properly under the head of negligent malpractice and wilful mal-

practice have been decided by the Supreme Court of Ohio.

In 1862, Jane Chambers accidentally dislocated her shoulder and otherwise injured her arm. Thereupon, she and her husband retained Dr. Jas. W. Craig as a surgeon to manage, take care of and treat the injury so received by her. Dr. Craig undertook to manage and treat the injury as a surgeon, but according to the claim of Mrs. Chambers and her husband, in so doing he did not exercise the ordinary care, skill or diligence of surgeons in such cases, but he managed and treated the injured shoulder and arm negligently and unskilfully and failed to cure the injury. On the trial of the case the Court charged the jury that Dr. Craig impliedly engaged and was bound to use in the performance of the undertaking such reasonable skill, diligence, and attention as may be ordinarily expected of persons in that profession; that he did not undertake to bind himself to use the highest degree of skill or an extraordinary amount of diligence; but to bring to the exercise of his profession in the particular case a fair, ordinary and reasonable degree of knowledge, diligence and attention. And that if the jury should find from the evidence that the defendant in the management of the treatment of the injuries of the plaintiff did not exercise the ordinary care, skill or diligence of the profession in such cases, that he failed to cure the plaintiff and that any of the injuries of which she complains resulted from such negligence the plaintiff would be entitled to a verdict.

But the plaintiff would not be entitled to a verdict unless the evidence satisfied the jury that some portion of the injury of which the plaintiff complains was the result of some want of proper skill, diligence or attention of the defendant or that the plaintiff was in some way damaged by such negligence.

The plaintiff requested the Court to charge that if having undertaken the treatment of the injury, Dr. Craig did not exercise the ordinary care, skill or diligence of surgeons in such cases but failed to cure such injury,

then and in that case the plaintiffs were entitled to recover in this action, unless it appeared from the proof that the plaintiff had suffered no damage from such want of care, skill or diligence. The Court refused to give this request in charge and the plaintiff excepted to it. The jury found in favor of the doctor, and the case ultimately found its way to the Supreme Court, which held (17 O. S., 254): "The implied liability of a surgeon retained to treat a case professionally extends no further in the absence of a special agreement than that he will indemnify his patient against any injurious *consequences* resulting from his want of the proper degree of skill, care or diligence in the execution of his employment. And in an action against the surgeon for malpractice, the plaintiff, if he shows no *injury* resulting from negligence or want of due skill, then the defendant will not be entitled to recover nominal damages."

What is the nature of the physician's undertaking, in the absence of an express agreement to bring about a good result? In 1836, the Supreme Court had this question before it in the case of Grindle vs. Rush, et al. (7 O., part 2, page 125), and in deciding the case, the Court says:

"The undertaking in each count of the declaration is laid as an absolute undertaking and promise to set the bone and cure the leg. Does the law imply any such contract? This point was decided in the case of Hardin vs. Matthews, in Geauga county, several years since, in the negative, and the plaintiff *nonsuited*. It was afterward so decided in Bliss vs. Long, in Cuyahoga county. Hardin vs. Matthews was a case of *tinea capiti*, and Bliss vs. Long a case of *obstetrics*. In the first the declaration charged an absolute undertaking to *cure*, and in the last to deliver; and the court was of the opinion that the law implied no such undertaking, and as no *express* promise could be proved, the plaintiff could not recover. In the case of Gallagher and wife vs. Thompson, Sup. C., 466, the declaration, among other things, averred a promise by the defendant, who was a physician and sur-

geon, to *set* and *cure Mrs. Gallagher's leg*. Evidence was introduced to prove the surgeon's retainer, in the usual way, and his attendance, and that the leg was not cured, but was rendered nearly useless. A motion was made by the defendant for a *nonsuit*, because there was no evidence of an express promise to cure, and the law did not imply such promise, and the motion was sustained. So far as we can learn, then, the decisions have been uniform on the circuit whenever the question has been presented. If a lawyer is retained, there is an implied obligation to bring to his client's aid integrity and ordinary judgment and skill, but not that he shall conduct his client's cause to a successful issue.

"The surgeon engages the ordinary skill of the profession in reducing a fractured bone, and diligence and care in his subsequent treatment, and to use his exertion and endeavor to cure, but a cure *itself* is frequently beyond his physical power. It depends not on him. The accoucheur engages the skill of *his* profession, and that he will endeavor safely to deliver, but there is no positive obligation to produce this result. The event is in the hands of Him who giveth life, and not within the physical control of the most skillful of the profession. On the whole, we are of the opinion the court *erred* in not giving to the jury the instruction sought, *that there should have been evidence of an express undertaking to cure* before the jury could legally have found for the plaintiff, as the law raised no such *absolute* undertaking."

When the average physician does not produce a good result and is accused by his patient of negligence or want of skill in the treatment of the case, he is rather apt to retort: "If you had followed my directions, you would be all right to-day." In the case of *Geiselman vs. Scott* (25 O. S., 87), decided in 1874, the Supreme Court defined the patient's duty and liability in that behalf. In its opinion, the Court says: "This was an action to recover of the defendant, a physician and surgeon, for malpractice in treating a swollen and diseased foot and ankle of the plaintiff. One of the questions presented

for our consideration arises upon the refusal of the Court to instruct the jury as requested by the plaintiff, and upon the instructions given in relation to the question of contributory negligence, on which subject there was testimony tending to show such negligence on the part of the plaintiff. The instructions requested by counsel for plaintiff were:

1. "That if they find any want of the ordinary care, skill, or diligence of physicians and surgeons, on the part of the defendant, which diminished the chance of the plaintiff's recovery, or increased his suffering, or prolonged his illness, such want of care, skill, or diligence would constitute injury to the plaintiff, for which he is entitled to recover.

2. "That if they find the plaintiff retained the defendant as a physician and surgeon to manage, take care of, and treat the diseased and swollen foot and ankle of the plaintiff described in the petition, in a skillful and proper manner, and that the defendant, being so retained, did professionally, as a surgeon and physician, manage and treat said diseased and swollen ankle, and in such management and treatment did not exercise the ordinary care, skill, and diligence of surgeons and physicians in such cases, and injury resulted to the plaintiff for such want of care, skill, and diligence, then and in that case the plaintiff is entitled to recover in this action," which the court gave to the jury with this modification: "If you should find that the defendant directed the plaintiff to observe absolute rest, as a part of the treatment to said foot, and that direction was such as a surgeon or physician of ordinary skill would adopt or sanction, and the plaintiff negligently failed to observe such direction, or purposely disobeyed the same, and that such neglect or disobedience approximately contributed to the injuries of which he complains, he cannot recover in this action, although he may prove that the defendant's negligence and want of skill also contributed to the injury. This grows out of the doctrine that a party who has directly, by his own negligence or disregard of duty, contributed

to bring an injury upon himself, can not hold other parties, who have also contributed to the same, responsible for any part thereof, nor does it make any difference that one of the parties contributed in a much greater degree than the other; the injured party must not have contributed at all."

We are of the opinion that the court did not err in so modifying the instructions requested by the plaintiff, whether the action be regarded as based upon the implied contract of the surgeon or upon tort.

It is a well-settled principle of law, that a party seeking to recover for an injury must not have contributed to it in any degree, either by his negligence, or the disregard of a duty imposed upon him by a party who, by his negligence or want of care or skill, may also, in some degree, have contributed to the injury.

CROUPOUS PNEUMONIA IN TYPHOID FEVER; SUBACUTE PLEURISY; DIABETES MELLITUS, AND HYPERTROPHIC CIRRHOSIS OF THE LIVER WITH JAUNDICE.*

BY H. A. HARE, M. D.,

Professor of Therapeutics and Materia Medica, Jefferson Medical College,
Philadelphia; Physician to the Hospital.

GENTLEMEN:—The first case that I bring before you to-day is that of a boy of 19, who entered the wards four days ago with a history that he had been taken sick five days previously, having been seized with a chill, some nausea and vomiting, great pain in the chest and high fever. He was admitted to the house on the supposition that it was a case of ordinary croupous pneumonia. Something about the appearance of his face and the color of his skin impressed me with the fact that this was not the only disease from which he was suffering, the moment that I saw him in bed in the ward.

*Clinical Lecture delivered at the Jefferson Medical College Hospital.

On asking to see his tongue I was quite positive from its appearance that, whatever might be his pulmonary condition, he also was suffering from typhoid fever, and this diagnosis was confirmed when on exposing his abdomen and chest I found a profuse crop of the rose rash of typhoid fever. His spleen, however, was very slightly enlarged and his liver extended very little if at all beyond its ordinary boundaries. He was troubled with a good deal of cough which gave him great pain and he was bringing up small quantities of very tenacious sticky sputum, which was slightly tinged with blood at times. A physical examination of his chest revealed the fact that he was suffering from pneumonia, which was chiefly involving the middle lobe on the right side of his chest, the physical signs of which were most marked, not anteriorly and posteriorly, as they so frequently are, but in the mid-axillary line. Indeed, it was only when his hand was held above his head and the axillary region was auscultated and percussed that the clear physical signs of a croupous pneumonia were developed.

In this connection it is important for you to remember that pneumonia may complicate typhoid fever in a number of ways. Sometimes it begins, as it did in this boy, with the onset quite characteristic of ordinary croupous pneumonia as a single infection. The patient goes to bed, is treated for his pulmonary disorder and only after a number of days on the development of rash and other symptoms of typhoid, does the physician find it necessary to modify his diagnosis and recognize the fact that, in addition to the pulmonary complication there is also typhoid infection. These cases of early pneumonia ushering in typhoid fever depend upon one or two causes. In all probability in the majority of them the patient suffers from a double infection and on the one hand the micrococcus of pneumonia results in a pulmonary lesion, while the more slow infection by the bacillus of Eberth produces the intestinal lesions and the general manifestations of typhoid fever. In a certain proportion of these cases, however, it would seem probable that the pulmonary

lesion is the result of the infection by the bacillus of Eberth and that this bacillus is responsible for the pneumonia, or in other words that the patient with pneumonia and typhoid in a certain proportion of cases is only suffering from a single infection and not a double one. Not only do we have pneumonia complicating typhoid by being a primary symptom, but we also have it coming on as a complication during the course of the disease, either as a result of the micro-organism of typhoid fever invading the lung, or because of the super-imposed infection by the micro-organisms which cause croupous pneumonia, or much more commonly a pneumonia arising at this time in typhoid fever is a broncho or catarrhal pneumonia and is due to an extension of the bronchitis to the tissues of the lungs surrounding the bronchial tubes. Then, again, during the latter portions of the attack of typhoid fever or during the convalescence, pneumonia may assert itself either in croupous or catarrhal form, the latter being much more common and arising sometimes as the result of imprudences, but more commonly being insidious and without apparent exciting cause. These complicating pneumonias in the middle or at the end of the attack of typhoid are by no means so rare as are the acute pneumonias which I have told you, sometimes, though rarely, usher in the disease. If you are careful physicians you will never fail during the course of a typhoid fever to frequently examine the chest anteriorly, posteriorly and laterally, to discover whether the concomitant bronchitis is by any chance passing into a more serious pneumonic process, for pulmonary complications in typhoid fever are necessarily grave ones. Another point of interest about this case is the question of his treatment. When I first saw him he was somewhat cyanotic, anxious, had difficulty in respiration, was troubled a great deal by his excessive and painful cough and really seemed very ill. His heart sounds were not as clear as they should be and his pulse was full but gaseous, being very easily obliterated by light pressure upon the radial artery. It was evident, therefore, that he needed both a cardiac and a vaso-motor stimulant, and I

directed the resident physician to administer to him 10 drops of digitalis at once with 10 drops of the tincture of belladonna, and after that first dose to give him 5 drops of digitalis with 10 drops of tincture of belladonna every four hours. Within 12 hours a very marked change for the better took place. His heart became stronger, his pulse more natural, his dyspnea less and his cyanosis largely disappeared. This treatment has now been continued with modifications each day according to the needs of the patient, for a number of days and he is doing very well.

The symptoms of typhoid fever which he manifests are mild. You will notice that while his temperature has been persistently high in the sense that he has needed sponging every two or three hours to keep it within bounds, he has responded very well, and the patient, each time that he is sponged, asserts that he enjoys the process.

The second case that I bring before you is in a young man between 18 and 20; he tells us that three weeks ago he began to suffer from pain in his left side in the neighborhood of the praecordium and axillary region. This pain has been persistent, indeed has grown slightly worse. It is increased by the deep respirations, or in other words by violent exertion. He has some cough, which, however, is very slight and which he endeavors to control because of the pain which it induces.

Physical examination of his chest reveals a very unusually harsh friction sound and a careful examination of the chest posteriorly at its most dependent portions upon his left side shows, as a result of this pleural inflammation of a subacute character, that he has a very slight effusion. The friction sound that I have spoken of is so coarse and harsh that at first one is inclined to regard it as being derived from some change in the lung itself rather than belonging to pleural inflammation, but a careful examination indicates that a roughened pleura is the cause that produces it. In this connection I want to warn you always to regard these slow and somewhat insidious

pleurisies, whether they be associated with effusion or not, as a possible indication of tubercular infection. Quite frequently a patient is treated for acute pleurisy or pleurisy with effusion, and is considered cured for a short time, when in reality a very careful examination of his chest would reveal the physical signs of early tuberculosis, or if these signs were not apparent, the physician should at least advise his patient to return to him every few weeks for a careful examination in order that a watch might be kept upon his lungs. Ordinary acute pleurisy, the patient being no more ill than the patient before us, has not a grave prognosis and does not require very active treatment, but should there be tubercular infection, of course, the favorable prognosis becomes very much modified. It is in the subacute or almost chronic form that counter-irritation does the most good, that is, in cases such as we have before us to-day. It certainly modifies but slightly an acute pleurisy and has little influence upon chronic pleurisy with effusion, but in this subacute or intermediate state, it holds out some prospects of doing good, and we will, therefore, order a small fly blister to this man's chest, direct him to avoid excessive exercise, to remain in the house except during the best of weather, to take a good nutritious diet easily digested, and we will see that his urinary flow is maintained in proper quantity by the administration of one of the potassium salts, as it is important under these circumstances to keep the eliminating organs active. Beyond this, medicinal treatment is not required, as his general condition is so good. If his general constitution were run down, it would be well to give him minute doses of iron, and certainly to add to the prescription some cod-liver oil.

The third case that I wish to show you is of considerable interest because it will serve to impress upon your mind several important facts in connection with diabetes mellitus: First, you will notice that the patient is an Israelite, and it is now a well known fact that Israelites are particularly prone to diabetes mellitus; second, I want

you to notice the very great degree of emaciation which this man presents. As he stands before you clad in one of the wrappers from the ward, he is about as attenuated a looking individual as you can imagine. His skin is dry and atrophied, he has scarcely any subcutaneous fat and he continually complains of great weakness in his lower extremities and in his arms. The weakness in his lower extremities, however, does not amount to a paraplegia. His urine contains about 10 grains of sugar to the ounce; its specific gravity is high, and he has had a considerable amount of thirst and craving for food. The third point about his case which I wish to impress upon you is this, namely, that more advantage can be gained from dietetic measures in diabetes than by the use of drugs, and, fourthly, I wish to urge upon your memories the fact that diabetes mellitus is probably only a symptom of several forms of perverted function or disease of different organs in the body rather than a disease itself. Finally, in this case of diabetes where there seems to be a distinct nervous element you will find that full doses of opium, or its alkaloids, will give you the best results in the way of treatment by medicines. Patients suffering from this disease take opiates in large doses more readily than ordinary individuals, and I have no doubt that this patient can take a quarter of a grain of the extract of opium three times a day with benefit and without the development of any symptoms of poisoning by this drug.

(Two weeks later this patient was again brought before the clinic, having gained seven pounds, and attention was called to the fact that the opium having been given him in ascending doses, he was taking $3\frac{1}{2}$ grains of opium three times a day without any of the manifestations of the physiological action of this drug. His pupils were not contracted, he was not drowsy, but seemed very much better in every way. The sugar in his urine had been decreased from 10 grains to 1 and a fraction grains in the ounce, and the quantity of urine from 64 ounces in the 24 hours to 35 ounces). Four weeks later all traces of sugar had disappeared and he was taking 8 grains of

opium three times a day, with none of the general evidences of its action.

The fifth case is that of a man whom cross-questioning reveals has long used alcohol to excess. When I expose the skin of his abdomen and chest you will notice that it is slightly jaundiced and that his conjunctiva is also somewhat yellow. He comes to us because of his gastric disturbance, with morning vomiting. You will notice that his right hypochondrium is somewhat swollen and enlarged and that his epigastrium is also protruding. Naturally under these circumstances we first think of abdominal distention through accumulation of flatus, but palpation and percussion at once reveal the facts that the enlargement is due to some firm, resisting organ which gives us a flat note on percussion, and deep palpation reveals the normal margin of the liver almost three inches below the border of the ribs in the mammillary line. There are two conditions which you must remember before you decide that the projection of the liver so far below the ribs is due to hypertrophic cirrhosis. One of these is acute inflammation with swelling of the liver, which is comparatively rare and which would be associated with tenderness and usually with acute illness; the other is the possibility of the pleural effusion on the right side, which, by pressing downwards upon the liver, forces it downwards. Examination of his chest eliminates this possibility.

It is not necessary for me to tell you that the patient must be forbidden any alcoholic beverage, that his diet must be regulated and limited to easily digested and assimilated foods, and that his gastric catarrh will probably be most benefited by directing that he shall take 30 to 60 grains of phosphate of sodium, or 10 or 15 grains of bicarbonate of sodium in a cupful of hot water taken in sips every morning on first rising. He should also be directed to protect his abdomen from cold by the use of a flannel binder, and should his gastric catarrh become exceedingly troublesome his stomach should be treated by means of lavage. Jaundice due to hypertrophic cirrhosis

of the liver is a very common symptom and thereby differs from atrophic cirrhosis, in which it is rarely observed.

As a rule, the prognosis as to life in hypertrophic cirrhosis is by no means so favorable as it is in the atrophic form.

THE MEDICAL TREATMENT OF EPILEPSY.

BY HENRY S. UPSON, M. D., CLEVELAND, OHIO,

Professor of Diseases of the Nervous System in the Western Reserve Medical School.

In speaking of the treatment of epilepsy, it might, at first thought, be considered possible to dismiss the whole subject with one word—bromids. This might be so if we had only the disease to deal with. If we could give unlimited amounts of the drug and could count on no complications arising the disease could, without much doubt, be easily cured. In practice, however, the bromids cause so many disastrous effects, including eruptions, irritation of the stomach, depression of the circulation, that the problem of the management of the epileptic is really a difficult one.

Without attempting to discuss the subject in full, I wish to present in brief the results of my own experience in controlling, especially, the major attacks.

For the major attacks of epilepsy in otherwise healthy individuals, the bromids are, without doubt, very efficacious. They should be given in fairly heavy doses well diluted, from 45 to 60 grains a day being usually sufficient. Sodium or potassium bromid, or the mixed bromids may be given. It is of especial importance to the patient to find out the time of his attacks. If they occur always at night, or, as sometimes happens, in the early morning, one large dose of 45 grains should be given a short time before the usual time of the paroxysm. In one patient for the last three years the attacks, consisting of a half-dazed condition, much like the so-called

reminiscent state, followed by headache, have always come on as the patient wakes. A large dose of bromid has prevented these attacks at night. He has not, however, been able to resist the temptation of lying down during the day for a moment, of course not with the idea of sleeping. A light doze is, however, followed by an attack. The obvious remedy for this patient is never to lie down during the day, but he is hard to control in this respect.

The most common contraindication to the bromids is an irritable stomach. Such a weakness is as serious a bar to drugs in epilepsy as it is in syphilis. The bromid of strontium is, in some cases, invaluable. In fact, it acts so well that it is a question whether it may not finally supplant the other bromids in all cases in which its cost does not rule it out. It must be given in rather larger doses than the potash salt. The average amount is about 60 grains a day. General depressing effects are much less, the functions of the stomach are not so much disturbed, and if the amount is carefully graded for the patient in hand the results are certainly as good as from the other bromids.

Of other drugs, only a few deserve mention. The best of them in my experience is trional. If for any reason bromids cannot be given, trional may be used in three or four grain doses three or four times a day. The amount should be reduced if the patient becomes too sleepy. I have seen attacks stopped altogether under its use for many months, but have usually returned to the bromids. The dangers of cerebral disturbance and hemato-porphinuria are probably exaggerated. Its continued use has never, so far as I have seen, been accompanied by any bad symptoms whatever. It has the great advantages of not disturbing the stomach, and causing no eruption. It is possible that in still larger doses it might be more efficacious. It may be combined with the bromids, especially the bromid of strontium. One patient, on whose stomach the bromid had a somewhat disastrous effect, has recently done very well on three grains of

trional three times a day by the mouth, and 80 grains of bromid of potash every other day by the rectum. It is probably better, when given by rectal injection, to make the dose of the bromid large and the interval long, in order to avoid the irritation caused by the frequent passage of the tube. The long tube should be used and passed well up.

From digitalis, one of the favorite remedies before the use of the bromids was discovered, I have had good results in only a few cases. The pulse should be carefully watched. If it is of quite low tension, digitalis may be useful, given with the bromids. It has very little effect on the attacks, so far as I know, given alone.

Belladonna may have a favorable effect in some cases on the lesser attacks, not on the major ones. Antipyrin and other coal-tar products I have used with the bromids, and have seen no good effect from their use. The same is true of the tincture of simulo, which was somewhat vaunted as a remedy for the lesser attacks.

What may be called the negative therapeutics of epilepsy are as important as the positive. In probably no one disease may more harm be done by incautious use of drugs, either for the epilepsy itself or for coincident troubles. Strychnin is to be avoided like the howling pestilence. Look at formulas for laxative pills in your catalogues from the drug houses. How many are there without strychnin? You say yes, but the dose is small. If there is enough to help the bowels it will harm the brain. I have seen epileptic attacks which had ceased for five years resumed after moderate doses of strychnin inadvertently given three times a day for two weeks. The effect of even one small dose is a step in the wrong direction.

Quinin produces cerebral hyperemia, and should be avoided. To cut short the attack, nitrite of amyl serves sometimes a good purpose, but only when the patient has warning. The same may be said of the ligature or encircling blister. These may be used when the aura travels up the arm or leg. In one case I have been able to stop

attacks commencing with an epigastric aura. The sensation in this patient always began in the epigastrium and travelled upwards. When it reached the head he fell unconscious. By clutching his throat firmly with both hands I could cut short the attacks. Experience has shown that attacks cannot be permanently stopped in this way.

The question of diet is an important one. There is, however, no exclusive scheme of diet which seems to offer the prospect of a cure. Herter has shown conclusively that intestinal putrefaction is greater just before the attack. It is of especial importance to keep the bowels clear and to enjoin on the patient great regularity in mode of life and the avoidance of undue fatigue and emotion. After an interval of several weeks or months without an attack, nothing is commoner than to get the history of a convulsion coming on after unusual fatigue or overloading the stomach or after an indulgence in alcoholic liquors.

In regard to so-called reflex epilepsy, I have long sought for it in vain. No doubt convulsions may be set up, caused, if you will, by irritation in almost any part of the body. This is notably the case in infancy. In such cases a strong predisposition to convulsions must exist. The probability is in favor of recurrence, even after removal of the exciting cause, or any number of exciting causes which may be found. Infantile convulsions, whether from teething, from intestinal worms or indigestion, are very ominous, and should determine the greatest care in the future management of the child. Convulsions in later life, whether from acute diseases, from alcoholism, or any other known cause, are to be regarded as symptoms of serious disability of the nerve-tissues.

No words are too strong in condemning the reference of all cases of epilepsy to reflex storms set up in any one, invariable, part of the body. I have treated patients in whom many operations, in one patient 24 operations, had been done on the eye-muscles. They still need the bromids.

In spite of the comparative failure of both the reflex

and the toxic theories to explain most cases of epilepsy, it is the urgent duty of the practitioner to seek out and remove every available, genuine irritation, and by regularity in diet and mode of life, by occasional change of air and scene, to put the nerve-cells of his epileptic patients into the best possible condition as regards that highest of all faculties, inhibition.

SKIN GRAFTING BY SIMPLIFIED METHODS.

CHARLES B. PARKER, M. D.

Every general practitioner has occasion to perform the minor operation of skin grafting, and yet within my observation it is not generally practiced, except by surgeons. The reason for this is not far to seek. In many cases the doctor has never attempted the operation and fears a failure, or he does not have the special instruments for performing the operation, or is deterred by the complicated details and solutions given by some authors as essential to success. An extensive experience has led me to the conclusion that only the simplest instruments, namely, a good broad razor, a pair of dissecting forceps and a sterile salt solution, made by adding one drachm of common salt to a pint of water and then thoroughly sterilized by boiling, is the sum total of the essential preparation for the operation of skin grafting.

Revordin's method proposed some twenty years ago consists in placing small detached pieces of cuticle the size of a pin's head or split pea upon the granulating surface. In the early days of my practice I saw some good results and also many failures by this method. I quickly learned that in practicing Revordin's method only those grafts nearest the healing margin "took" and formed islands with epitheliating margins. This method is tedious, must be repeated again and again, and is now entirely superseded by the method of Thiersch. In 1874, Thiersch of Leipsic made his first communication on this subject before the German Congress of Surgeons, but

failed to provoke much attention. In 1886 he again called the attention of German surgeons to the value of this method and detailed his experience in the twelve years from his first communication. So remarkable were these results that his paper aroused great enthusiasm and his suggestion put in practice with such favorable results that this method has, except for special cases, entirely superseded all other methods.

Thiersch's method consists in taking from fleshy parts of the body long shavings of the superficial layers of the skin. These shavings vary in length from one-half to five inches and in width from one-half to two inches. The sections one by two or three inches are most easily cut and transferred with the least possible delay and difficulty. It has usually been thought necessary to first cut these sections, then transfer them to the salt solution and thence to the surface to be grafted. I have found this procedure to be wholly unnecessary. The grafts when thus placed in a salt solution curl up, with the cut surface innermost, and it is next to impossible to unroll them completely afterwards. When the edges remain inrolled, of course no union will occur, but rather sloughing of this portion of the graft takes place and often death of entire graft. I would suggest that the grafts be cut from a surface (usually the thigh) which has been previously rendered aseptic by scrubbing with soap and water, then with bi-chlorid 1-2000, and this solution washed away with thoroughly sterile water. Alcohol is to be poured over the surface and then rubbed dry with a sterilized towel. The alcohol hardens the skin and makes it possible to easily and quickly remove a much larger and more regular graft. The razor used should be sterilized and moistened with the salt solution. When cut, the grafts should be immediately transferred to the surface to be covered and then placing the razor edge upon this surface the graft can be gently floated off and spread out evenly on the granulating surface. If necessary, a few drops of the warm salt solution can be run out onto the razor blade.

The Preparation of the Wound Surface.—A recent wound surface, whether from injury or operation, needs only perfect disinfection and douching with the salt solution. Thus in a case of Keloid involving the pinna of the ear, which had three times been removed and recurred each time more extensively than before, was again removed, grafts immediately placed upon the wound, every one of which grew and showed no tendency to degenerate later. In amputations following railway injuries, especially of the fingers and hands, where the securing of a flap sufficient to cover the wound surface would require the sacrifice of important parts and greatly impair the usefulness of the mutilated member, grafts may be successfully placed at once upon the denuded surface. Not only do the grafts heal kindly, but there is good evidence for the opinion that the general healing process is accelerated by the grafts. It is a rule now of my practice when finger tips are pinched off to remove any protruding bone and immediately cover the end with a graft, in this way avoiding a long and tedious process of healing by granulation.

If the wound surface to be grafted is covered with healthy granulation, it is to be scrubbed with soap and water, flushed with bichlorid 1-2000 and sterile water and then with warm salt solution and the grafts cut and applied. The granulations not being healthy is no reason that the grafts will not grow, as the details of the following case will prove: A local physician afflicted with epilepsy fell in a fit while reading at his desk. In the fall he overturned a student's oil lamp and received extensive burns of the third degree over the buttocks and back of thighs, even down to the popliteal space. Lofty, pale exuberant granulations formed on the whole surface, which at the end of some weeks showing no tendency to heal, the operation of skin grafting was decided upon. As the doctor was suffering from chronic bronchitis and heart disease, it was thought best to use chloroform as the anaesthetic. After a prolonged and careful attempt to administer chloroform the patient's condition

was so alarming that the operation was abandoned and the patient returned to bed. It seemed too bad to leave him thus, and as an experiment a few grafts furnished by the brother were laid upon the exuberant granulations with no other preparation than scrubbing and rendering the granulating surface perfectly clean. To our great surprise, the grafts sunk into the melting granulations and epitheliation began. In this manner the whole surface was gradually covered as fast as we could secure the grafts, and they grew as readily as in those cases where we had previously prepared the granulating surface by scraping. This experience I have repeated on other occasions with the same satisfactory result. In England there is a law that the grafts must be taken only from the subject himself. In this country there is no law against securing the grafts from any source, but certainly the freedom of party from whom grafts are taken from constitutional diseases should be assured. If the granulating surface be a chronic ulcer, a sharp knife is to be drawn along the margins of the ulcer and then the bone scraped with Volkman's spoon, washed off as in the case of healthy granulation, compressions made with sponges, the grafts cut and applied. But even this I have found by experience is not necessary, as illustrated by the following case: A young man who had been struck by lightning had hot flat-irons placed at his feet to revive him, and as a consequence the whole plantar surface of one foot and four-fifths of the other sloughed out. A foul, chronic, indolent, painful ulcer, with elevated calloused edges resulted. There was no tendency to heal and the tendons of the short flexors were exposed at the bottom of the ulcers. To scrape out such an ulcer would render it so deep as to generally impair locomotion; I therefore thoroughly prepared the surfaces of the ulcers, as already described, and applied the grafts with the most happy results. The grafts all "took" and the surfaces were completely covered with epithelium in three weeks. It was some weeks before the patient could be induced to rest his weight upon his feet, but at the end

of six weeks he walked to my office. Since this operation I have treated a number of varicose and indolent ulcers in this manner and in each case with as perfect success. The numerous cases of varicose ulcers which seek relief at our city hospitals, in the early winter, and formerly required two or three months to effect a cure, are now grafted and discharged cured in three weeks. This method is to be highly recommended in all such cases. An anaesthetic, though not essential in all such cases, is very desirable, as the patient is thus under perfect control. If there is any preparation of the surface to be grafted it should be made first, and all oozing controlled by compresses.

The Dressings.—It is my custom to cut out a piece of gutta-percha tissue, just a very little larger and of the same shape as the grafted surface, and with a pair of scissors make a number of snips well into its edges that drainage may be complete. This is dipped in bichlorid, 1-2000, then in salt solution, and over this iodoform gauze, then bichlorid gauze, and sterilized gauze or cotton applied and secured by a snug bandage. I do not dress before the fifth day, and if conditions are favorable not until the eighth day, delaying the longer the smaller the grafted surface.

A favorite dressing of my own is to lay strips of gutta-percha tissue, which have been soaked in the neutral salt solution, crossed lattice fashion over the grafts when in place, as the frequent dressing is liable to disturb the grafts. The suggestion of Thiersch to dress with water dressings, which are to be changed every four hours, I have never practiced.

If the grafting has been done on an extremity or movable part of the body, the part should be fixed with splint or dextrine or light liquid glass bandage. The surface from which the grafts are taken is to be dressed with gutta-percha tissue and covered as already described.

From these experiences, then, it is seen that there is no elaborate treatment of the grafts in intermediate solutions necessary; that the surface to be grafted may be a

fresh wound, a healthy granulating surface, a curetted surface or even unhealthy granulations; the essential elements of success consisting in reasonable gentleness in securing the thinnest possible grafts and an absolute aseptic operation.

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SAMUEL W. KELLEY, M. D., Editor.
FREDERICK K. SMITH, M. D., Associate Editor.

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Editorial.

ONE OF THE PASTIMES OF THE ARMY SURGEON.

In a previous article on the duties of the army surgeon we have described the immense amount of "paper work"—clerical work—which it is his duty to perform, or under the most favorable conditions as to clerical assistance, to cause to be performed properly and according to the dictates of the army officers' bible—army regulations. Among these we merely alluded to letter writing. Now the letter writing is worthy of more than a passing allusion, and we believe the introduction here of a little correspondence, at least one side of the correspondence,

together with some comments upon points introduced by the letters, will possibly be of some interest to readers of the GAZETTE. The letters before us are not those brief and peremptory communications all numbered and endorsed, which come from some headquarters higher up or the department itself and known as orders. They seldom require an answer, in fact, admit of no "back talk;" they call for prompt compliance. Nor are the letters to the commanding officer recommending certain sanitary measures, nor those at greater distance in the organization reached "thro' military channels," the ones we shall present, with their stereotyped beginning, "Sir, I have the honor," etc., etc. Nor yet are the usual letters or notes constituting orders to subordinate officers the ones under consideration. We shall present some typical letters from the friends and relatives of the soldier boys which the surgeon should answer, and feel that there is no breach of confidence, as no names are given.

Here is one which demonstrates that the army surgeon should be proof against bribery, as he might yield to the temptation of ill-gotten wealth; and that he must steel himself against the charms of the fair sex:

"HANNIBAL, MO., July 16, 1898.

"KIND SIR:—I wish to write a few lines to you in regard to my grandson, ———, belonging to ——— Cav. Troop ———. There was a young man here that saw him said he looked very badly and said he complained of his heart hurting him and said it was on account of jolting on the horse so much; said he was also getting deaf. When I heard this it almost broke my heart, for I knew he had never been used to hardships. Will you be kind enough to look after him at once? I am almost broken-hearted; I am his grandmother, 70 years of age. If you will do this for me—get him released by an honorable discharge, and transportation home, I will send you \$5.00 for your trouble the moment I know he has his release. I am honorable and will do as I say; that isn't all, I ask God's blessing upon you

that you may have success in all your undertakings. As for my grandson, he would never murmur; he is one that if he undertakes anything, he will keep to it even if he should fall.

" Please tell me if you get my boy's release on account of disability, how and where to send the money to you. I will send it sure if you get his release. I will now give you my address. — — St., Hannibal, Mo. Mrs. — — —. Please answer at once and relieve a broken-hearted grandmother. God bless you all and every soldier in the U. States, that we may soon have peace. Please write to me. Yours with respect. God bless you all, forever.

" Mrs. — — —,

" Hannibal, Mo.

— — — St."

" If you should ever get to Hannibal, be sure to come to my house and you will get a hearty welcome."

Pain about the heart, or through the thorax, was frequently complained of by cavalry recruits. It generally disappeared after longer practice at riding. The deafness was due to quinine administered for malaria.

Here is another, of a different kind:

"*To the Surgeon — — Cavalry Brigade, Tampa, Florida.*

"DEAR SIR:— I write you in regard to my son. We do not hear from him very minutely about his health, but have been assured by others that he is ill most of the time. I am sure if his bowels are in such a weak state and also having the malaria, he is in no condition for drills, and certainly Tampa is a most unfit place for him, even if excused from duty. I would be grateful if you would look him over carefully and permit him a sick leave if he is ill. He might recover rapidly if allowed to come north and soon be able to return to his regiment. His name is — — —, and is in — — Troop, — — Cavalry. I hope you may find him soon and that I may hear favorably from you concerning him. He will not give up easily; he comes from an old line of brave and illustrious soldiers, Admiral Drake being in direct line of ancestry.

I myself endured three years' hardships in the Civil War, and know something of the hardships attending war.

"Very truly yours,

" July 18, '98.

Ewingville, New Jersey."

I quite agree with this father that Tampa was "no fit place" for his boy, nor for any other white man, during the rainy season. And yet soldiers were held there for at least a month, at the most liberal estimate, after there was the least possible use or excuse for their being there. This caused an immense amount of sickness and suffering, in spite of all the efforts of officers who were on the ground to alter the conditions or get permission to go elsewhere. As to the drills, they were modified to suit the lessened strength of the men in nearly every command, and the usual hours changed so as to avoid the heat of the day. I had the satisfaction of informing the father that his son was not only in fair health but was no disgrace to his fighting ancestry, being as good a soldier as any in the whole command.

There lies before us a letter from a Probate Judge in the State of Missouri. The judge proceeds, with too much legal circumlocution for repetition here, to request a certificate over our official signature, showing the rank, name of company and regiment of a certain soldier, the date of his contracting his fatal disease or the date of admission to hospital, and the date and immediate cause of his death. He also wants another certificate procured from the surgeon in charge of the hospital to which the soldier was transferred, showing his admission, his disease, date and cause of his death. The object being to show that the soldier died of a disease contracted in the service, so that a pension may be secured. Such letters as this, which if answered as requested require a great deal of time in looking up the data and even further correspondence to secure it, are frequent and persistent aggravations. An army surgeon of Cleveland who served in the Civil War once showed us a large drawer full of letters regarding

pension claims, and more letters still coming after thirty years. Usually all the data necessary are upon the records at the Surgeon General's office, at Washington.

The next letter is written in a careful, pretty feminine hand, upon dainty note-paper. The writer is probably a French woman, and her faulty English pardonable. After a most polite introduction, she writes:

"Taking my liberty in directing these lines to you, I beg you for your kindness to inform me as to Mr. L——'s whereabouts. He is with the Hospital Corps of the —— U. S. Cavalry. I am [as are also his relatives] very anxious to hear of him. The last he wrote was from Siboney, Cuba, on the 10th of July. Hoping that you will hear me and answer soon, I will remain very thankful to you.

Your servant,

MARIE ——."

We had the pleasure of sending an answer to sweet Marie in the person of her lover himself on a furlough — not dangerously sick, but sick enough to be furloughed home to be nursed into health. The Government was exceedingly liberal with furloughs during this war. Paragraph 1, General Order 114, allowed surgeons to grant 30-day furloughs to all soldiers sick in hospital as soon as able to travel, with transportation home and commutation of rations for the journey; and thousands availed themselves of this liberality.

The recruit is not only a sore trial to line and non-commissioned officers, but to the medical officer as well. He not only drills clumsily, but he frequently does not know how to take care of himself, or will not do it if he knows how. He gets sick. He uses his accoutrements awry and marches or rides so awkwardly that his feet or his seat are apt to be afflicted with galls, blisters, boils. He sprains his joints, and is kicked by the horses, trips on his own sabre, or perhaps shoots himself or a comrade by using ball for blank cartridges. He is pretty sure to get homesick, and if, by heaven's special favor, he escapes actual disease or injury, he is apt to imagine that some-

thing ails him. Sometimes he malingers to escape duty or obtain discharge. Sometimes his friends endeavor to aid him either honestly or dishonestly. If they are honest in their statements we wonder how the recruit ever got into the service. Sometimes the complaints are pitiful.

Here is a specimen letter from a Western town:

"DEAR DR.:—I have a son F—— L——, in Troop——, —— Cavalry, that should be mustered out or granted a 30 or 60 day furlough at once. He never "kicks," squeals or complains until he is ready to drop dead. He is sick, has the piles and otherwise disabled, and his old mother and myself are very anxious to have him come home. I am an old unfortunate worn out merchant, having lost all my busy life's earnings, \$45,000.00, by fire a few years since; resumed business on a small scale with nothing but an honorable mercantile reputation and am having a hard struggle. F—— was my main clerk in store. We objected seriously to him joining the army for many reasons. I am 65 years old, unable to do much, had to employ a good salesman to take F——'s place in store at \$60.00 per month. F—— never done any hard work at home because he was not able; he was an invalid from 9 to 14, deaf, dumb and partially blind, caused by relapse of scarlet fever which left him in bad shape ever since. As you can see on investigation, his *spine* also and brain is still affected. F—— is timid, never been away from home, will not ask or request any favors for himself.

"Now Dr., will you kindly use your best influence to have Our Boy mustered out or at least on a furlough for 30 or 60 days."

But we fear the list is growing tedious, or that we fail to make apparent points which will only be obvious to those who have had similar experience.

Here are letters wanting certificates as to illness so that lodge dues can be obtained. Here are so many letters wanting date and cause of illness or injury that it is very apparent the pension roll following this war will be

a very, very large one. The nation will still be paying for this war after all the present readers of the GAZETTE have gone to the respective reward prepared for those who pay and those who do not pay their subscription to medical journals. Here are letters—a few—thanking the doctor for his interest and kindness, and then wanting information—or an extension of furlough. Wonder whether there would have been any thanks if they didn't want something more? Here are letters in great variety,—all should be answered—no matter if the doctor is tired to death with his work—or the camp is on the move, or the tent is fluttering and flapping in the wind in a deafening way and the candle blows out,—letters should be answered—or anxious hearts will be kept waiting, and people will say the army surgeon does not care anything about the men.

Some of the recruiting must have been done in a very careless or hurried way. Quite a few we had to discharge for some form of disability, others should have been refused for general unfitness. In other cases disease might be difficult for the recruiting and the examining officers to detect on a brief examination, for instance, insanity. Here is a letter to show what queer cases one meets. It is not the only one of its kind under our observation. Imagine the trials of the sergeant with this man. His preference for an insane asylum rather than the army is somewhat severe:

“JULY 30, 1898.

“*Dr. ———, at ——— Cav. Hospital:*

“As your name is the only one I have heard called out, I will take the privilege of writing to you concerning my sickness for the last two years. I am now on the sick list, Mr. ———. Two years ago on Dec. 21st I was sent to the Athens State Asylum by my wife. She brought me home in nine weeks after. I was a farmer and worked very hard. So this last fall, on Oct. 16th, she sent me again, and I was there until Feb. 3rd. Since I have been in this country I haven't seen one well day; I feel as if I were going insane again. The asylum has me under their

jurisdiction, they have not discharged me. The other day when I was drilling the sergeant said that ever since I have been here I didn't know how to drill and spoiled the whole shooting-match. That hurt my feelings, and they took me off to one side and a man by the name of O'Connor got me so rattled that I thought I was loosing my mind. Mr. ———, I would rather not be in the ranks drilling again; a person subject to insanity, as I am, does things without knowing what he does. So cannot you discharge me from this war. I would rather go back to the asylum for treatment, that is the only place where my disease can be cured. Please favor me by same.

Yours trustingly,

—————."

Here are letters from philanthropic individuals and organizations who have donated supplies to the soldiers and want to know if they were received, or if they were useful or if more were needed. By the way, the amount, the variety, the appropriateness, and in some instances the oddity of the articles donated are something marvelous.

These are not all the varieties of letters, but are perhaps enough to satisfy the reader that even if he does not count it as one of his serious duties, letter-writing is considerable of a pastime for the army surgeon. It does not leave him much time to comply with those letters requesting articles for periodicals.

DEATH OF A PROMINENT CLEVELAND PHYSICIAN.

The medical profession of Cleveland has sustained a heavy loss in the death of Dr. John F. Isom, who died at his home, No. 69 Kennard St., on Sept. 25, 1898. He had been ailing for some time, and his condition was supposed to be due to an attack of indigestion, but Dr. H. J. Lee, who was called for advice, found him suffering from a serious heart affection. Dr. H. K. Cushing was also called, and treatment for relief of the heart was

carefully administered. During the three weeks of his illness Dr. Isom suffered considerable pain, and had two severe sinking spells, from the last of which he failed to rally. By reason of digestive difficulties, his strength had become much reduced, so that he sank gradually, becoming unconscious and passing away at four o'clock on Sunday, Sept. 25th. The funeral services were held at his late residence, on Sept. 27th, and the interment was at Lake View Cemetery. The Loyal Legion, of which he was an active member, attended the services in a body, and some of their number served as honorary pall-bearers.

Dr. Isom was about sixty years of age, having been born in England in 1837. He came to this country when a child. His early days were spent at Skaneateles, N. Y., and it was there, on the completion of his education, that he took up the study of medicine. He removed a short time afterward to Champaign, Ill., where he enlisted in Co. F, Twenty-fifth Illinois volunteers, at the breaking out of the Civil War. His war record was one of which he might well have been proud. He was twice promoted while with Co. F, receiving the position of first lieutenant and afterwards that of captain. He was transferred from his company to the Army of the Cumberland, under Gen. Rosencrans, the day after the battle of Shiloh. Immediately following this change, and during the last two years of the war, he was assigned to the position of post quartermaster, with headquarters at Nashville, Tenn., having charge of all disbursements of supplies for the western district. His faithfulness and ability in this capacity are attested by the many prominent officers in the army, with whom he came in contact, and the records of the war contain honorable mention of his faithful services at different times, including his personal record as a soldier, as well as a quartermaster. He was serving in the latter capacity at the time of Sherman's march to the sea. While at Nashville, he was married to Mrs. Frances Grosvenor, whose acquaintance he had made at Champaign, Ill. Mrs. Isom went to

Nashville with her husband on his return, and was with him there until the close of his army service. After the war he came to Cleveland, engaged in business for a short time, then resumed his medical studies, and finally began the practice of medicine in this city. As a physician he was widely known and very successful. He served as coroner of Cleveland for two years, and both in this capacity, and in private practice he was a man who was highly respected. He was genial, kind and sympathetic, answering the calls of rich and poor alike, regardless of the uncertainties of remuneration. His loss will be deeply felt, both by his personal friends and by his medical associates.

C. W. S.

NEUROLOGICAL NOTES.

Optic Neuritis in Typhoid Fever.—Since accurate observation has shown that in nephritis the optic papillæ may assume a condition identical in appearance with that met with in meningitis and brain tumor, it is of interest to note that typhoid fever may also be the cause of such changes as we have hitherto believed accompanied gross changes in the brain alone. C. Braine-Hartnell (*British Med. Jour.*, June, 1898), reports a case of typhoid in a lad of 11 years that pursued a fairly regular course for 16 days, when inequality of the pupils developed and the ophthalmoscope revealed a marked double optic neuritis. Because of little diarrhoea, irregular temperature, absence of petechiae, and presence of the optical symptoms, a diagnosis of meningitis was made.

A p. m. three days later disclosed typical inflammation of Peyer's patches and the solitary follicles, but absolutely nothing in the brain to explain the optic neuritis.

Intermittent Argyle Robertson Pupil in Tabes Dorsalis.—Inasmuch as the Argyle Robertson pupil is often the determining symptom in tabes dorsalis, a knowledge that it may disappear and then again reappear is most important. H. Eichorst (*Deutsche med. Wochenschrift*, June, 1898), reports a number of cases of undoubted tabes, under ob-

servation for several years that showed typical tabetic pupils for long periods of time, followed by other periods when the pupils would respond to light with varying degrees of readiness.

The reviewer was some years since much puzzled by the aberrant behavior of the pupils of a tabetic who was also a victim of a monocular central cataract. Careful and repeated examination would at times show a characteristic tabetic pupil, other times the pupil was active to light. This intermittency persisted over one year before the pupils became small and rigid. Before reading the article of Eichorst the reviewer had believed his case to be singular and a curious disobedience of a recognized law.

Abscess of the Brain in Infants.—HOLT (*Archives of Pediatrics*, March, 1898), sums up a careful study under this title with the following conclusions:

1. Abscess of the brain in children under five years is rare.
2. The principal causes are otitis and traumatism.
3. It rarely follows acute otitis, but most often neglected cases, and is usually secondary to disease of the petrous bone.
4. In the cases occurring in infancy without evident cause, the source of infection is probably the ears, even though there is no discharge.
5. The development of abscess after injury to the head without fracture of the skull is extremely rare. In nearly all of the traumatic cases definite cerebral symptoms show themselves within the first two weeks after the injury. In cases with falls as remote as several months there is probably some other cause, such as a latent otitis.
6. In a large proportion of the cases only general symptoms are present, and these in very great variety.
7. Focal symptoms may be misleading unless they are constant, and even then they may depend upon associated lesions, such as meningitis. Motor symptoms only can be trusted, since the sensory symptoms are difficult or impossible to determine in infants or young children.

8. Rapid progress, fever, and a history of injury or otitis generally make a diagnosis from tumor easy. In the slower cases with little or no fever, valuable assistance may be obtained from lumbar puncture.

9. From acute meningitis the diagnosis is more difficult, and in the cases in which there are only terminal symptoms the diagnosis is impossible. In the more protracted cases the distinctive points with reference to abscess are the slower and more irregular course and, as a rule, a lower temperature.

10. On account of the great amount of shock attending brain surgery in very young children, operation should not be urged unless definite localizing symptoms are present, the principal one being hemiplegia.—*American Jour. Med. Science*.

ALDRICH.

Periscope.

Brewers' Yeast: Cassalt and Marc, Beylot, Bordeaux, France (*Aertzl. Rundschau*, 22), recommend brewers' yeast in diabetes in doses of 2 to 3 tablespoonfuls. Every 3 or 4 days it is reduced to 1 tablespoonful, also from time to time it is omitted. Disagreeable features, not constant, but frequent bad smelling eructations, which continue until patient is used to the diet.

Lead Colic: Deléarde, Lille, France, treated five sick with lead colic by injecting 500 c.c. of physiologic salt solution under the skin of the abdomen; in all the cases, muscular pain soon disappeared; after 24 hours, instead of the constipation, a beneficial diarrhoea set in, lasting for two to three days, when it ceased.

(*Société biologique de Paris*, Feb. 6, '98), *Dysentery:* Attygale (*British Med. Journ.*), has treated numerous cases in Ceylon of tropical bowel troubles; he has discarded the use of ipecac as of little use there, but ascribes to ammonium chlorid almost specific action. He gives it in 4.0 gramme doses every 4 hours, allowing the patient only a milk and arrowroot diet. After three days the blood usually disappeared from the stools; in but few cases was it found necessary to employ opium and can-

nabis indica later. Then the opium was used in but small doses only.

Iron subcutaneously: Birgelen, Erlangen *Medical Polyclinic*, reports his experience in the use of injections of iron in four cases of chlorosis and anæmia. He used ammonio-citrate of iron in a 10 per cent. aqueous solution (0.1 decigramme of the iron salt to the syringe full); because of fungoid growth, the solution was made fresh every eight days. Injections were made into the arm; at the point of injection painful red swellings, readily controlled by cold compresses, were occasioned. In two cases the results were of the most satisfactory character; in one they were negative, in the fourth had to be abandoned because of the discomforting inflammatory after-effects. He suggests this method of treatment where the internal administration of iron is precluded (*Münchener med. Wochenschr.*, 30.)

Eczema of the Palm: Good results were obtained by S. E. Hale, from the following:

Sodii zoziodol	2.0
Zinci oxidi	5.0
Nugt. Petrolii	10.0

M. Apply twice daily.

(*Münchener med. Wochenschr.*, 27). *Glutoid capsules:* Glutoid capsules prepared by Dr. C. F. Hausmann, of St. Gallen, Switzerland, according to the ideas of Prof. Sahli and Dr. Weyland (*Pharm. Centralb.*, 1897, 38, 24), by hardening gelatin capsules with formaldehyde. They are designed to pass through the stomach and be digested in the bowel. Prof. Sahli (*Correspondenz-Blatt f. Schweiz Aerzte*, 1898, Nr. 10 and 11), says they are made in three grades of hardness, which in commerce are designated by decimal figures, signifying in how many hours and tenths of hours they can be dissolved in an alkaline pancreatic solution at 40° C. The degree of hardness, 2.6 denotes a dissolving period of two hours and 36 minutes. The lower hardness is marked 1 to 1.5; medium, 1.9 to 2.5; greatest hardness, 2.5 to 3.5. In practice, the medium and maximum hardnesses are principally used; they resist artificial pepsin digestion at 40° C. for 7 and 12 hours, respectively (in the weaker grade, 1.5 hours.)

The employment of glutoid capsules serves three purposes:

First, diagnostic use; to determine pancreatic disturbances; for this purpose the iodoform glutoid capsule is administered and if the pancreas are doing their normal function, iodine can be detected in the saliva in four to six hours after (Sahli).

Second, therapeutic application (*a*) to protect medicines from interference on the part of stomach digestion (pancreatic preparations, magnesia usta, or for substances whose actions are alone desired in the bowel — calomel, itrol, chloroform, quinin salts, for intestinal disinfection, and (*b*) to protect the stomach from the injurious influences of harsh medicines (menthol, capaiva balsam, santal oil, creosote, guaiacol, Bland's pills, oil of wintergreen), and serve as a pleasant method of administering salicylic acid.—*Pharm. Centralb.*, Nr. 36, 1898.

SPENZER.

Among Our Exchanges.

The general instruction of the books that when you find a patient suffering with *diabetes mellitus*, his diet should be restricted as promptly as possible, should be taken with a good deal of allowance. The fact is — and DR. CHAS. O'DONOVAN, of Baltimore, has discovered it to his sorrow¹ — that it is a serious matter to suddenly take away the food a diabetic has been freely indulging in. No matter how deleterious that food may appear to be on theoretical grounds, the fact is that the patient has accustomed himself to it, and a sudden change to an unwonted diet may be followed by rapidly fatal symptoms. DR. O'DONOVAN cites two cases in his own practice. The one, a stout man of muscular build and of previous good health except for an attack of jaundice two years before, noticed that he was losing flesh — about 30 pounds in four months. He also noticed that he was very thirsty and passed a large quantity of urine. He was very fond of sweets and starchy foods. His urine was found to contain 4 per cent. of sugar, and so sweets and starchy foods were forbidden and he was put on a strict diabetic diet, which he adhered to faithfully till he collapsed. He died in coma four days after the beginning of treatment. The other was a clerk thirty-three years old, always healthy except for one illness of two weeks some ten years before, during which he was delirious. For four or five years he had

¹ *Maryland Med. Journ.*, April 23, 1898.

noticed that he was excessively thirsty, but for two months his thirst had been extreme, and during the last four weeks his weight had fallen from 151 to 130 pounds. He was working regularly every day. He was passing about two gallons of urine daily—sp. gr., 1.033; sugar, 5.06 per cent. Heart and lungs were sound. He also was put on diabetic diet. In forty-eight hours he was so weak he could not rise from the couch, in twenty-four hours more he was comatose, and in fifty-two hours, dead. It would seem that in certain diabetics the sudden withdrawal of the accustomed carbohydrates is followed by as prompt collapse as is the sudden withdrawal of his accustomed anodyne from a morphine fiend, and DR. O'DONOVAN advises especial caution in these cases where the ferric chloride test shows the presence of diacetic acid in the urine. And while you are cautiously bringing your patient down to a diet accurately adjusted to his needs and strictly scientific in all its details, it will do no harm and, according to M. DE ESTOY,² it will be likely to benefit him a good deal to put him on methylene blue— $7\frac{1}{2}$ grains per day. Clinical evidence is accumulating to indicate that certain cases of *albuminuria* and *dropsy* improve greatly under the exhibition of the drug, and it is becoming quite a favorite in *gonorrhœa* as well, and any tendency to produce strangury, which it occasionally seems to do, may be lessened, so DR. ORVILLE HORWITZ claims, by combining nutmeg with it,³ and so DE ESTAY, having a case of albuminuric diabetes, put the man on methylene blue— $7\frac{1}{2}$ grains per day—and found that not only was the albumen reduced to a mere trace, but the sugar also fell from 6 per cent. to 2 per cent. in eight days and almost completely disappeared at the end of five weeks. In a second case, passing urine with 3 per cent. of sugar, 6 grains of methylene blue were given daily in divided doses for four weeks, at the end of which time the amount of sugar had fallen to one-half of one per cent. If, as some claim, *diabetes mellitus* be a nervous disorder, and if there be a virtue in therapeutic suggestion, certainly methylene blue possesses that virtue in a high degree. The first time the patient urinates after taking the drug he realizes as he never realized before that something radical is being done for him, and that suggestive realization is repeated with each act of micturition—and so in this one drug are combined as perhaps

² *La Méd. Moderne*, 1898, ix, 53.

³ *Philadelphia Polyclinic*, 1898, vii.

in no other the elements of psychic as well as physical therapeutics.

For some time back it has been the habit of physicians to blame the midwife for every case of *puerperal fever* occurring in her practice, or to assume that when a fellow-practitioner had a case it was because he was careless in the way of cleanliness. But it is beginning to be recognized, in Chicago at least, that were every midwife and every physician scrupulously aseptic, *puerperal fever* would nevertheless claim no inconsiderable number of victims, for the reason that no washing of hands on the part of the midwife or wearing of sterilized aprons and caps and slippers on the part of the obstetrician, nor yet scrubbing the patient's abdomen with antiseptic soapsuds, nor shaving her pubes, nor even douching her vagina with bichloride, permanganate, or carbolic solutions can counteract the infection long since contracted from the septic urethra of a gonorrhœic husband. That infection has altogether too many laps the start; midwife and obstetrician are helplessly handicapped. DR. ALBERT H. BURR⁴ estimates (a Chicago estimate) that upwards of 30 per cent. of women become gonorrhœic for the reason that the majority of males become sooner or later infected. The gonococcus is not self-limited, but on the contrary it is most persistent in its normal habitat, being able to exist months, or even years, in the urethral follicles, and to retain unimpaired its power to infect — so that the greater portion of infected males remain uncured in the chronic or latent stages for indefinite periods, during which they can communicate the disease, and it is doubtful if chronic gonorrhœa in the female is ever cured, owing to the tendency of the gonococcus to penetrate the basement membrane beneath the cylindrical epithelium of cervix — body of uterus, and tubes. These statements of the doctor's are by no means wholly new, and his conclusions that: "(1) Gonorrhœa is a widely disseminated disease, especially persistent and dangerous in females; (2) gonorrhœa is directly or indirectly a factor in puerperal sepsis, and accountable for a larger percentage of complications and fatalities than commonly supposed" — are fully warranted by his premises. But the facts he gives would warrant him in going still further and concluding that: (3) In view of the wide dissemination of gonorrhœa, and in view of its proneness to cause local and general sepsis when it gains access to the circulation

⁴ *Jour. Am. Med. Association*, Sept. 3, 1898.

through abrasions, in any given case of puerperal fever, the most probable cause is gonorrhœa. Instead, therefore, of taking the blame ourselves, or making a scapegoat of a conscientious midwife or nurse, we should firmly saddle the blame where it belongs in four cases out of five — on the youthful indiscretions of the husband; for his wife's puerperal fever is but too commonly the aftermath of his own "wild oats."

TUCKERMAN.

New Books.

LECTURES ON TUMORS. John B. Hamilton, M. D., LL.D., Prof. Surgery, Rush Medical College and Chicago Polyclinic, etc. 3rd edition. P. Blakiston's Sons, Publishers, Philadelphia. Price, \$1.25 net.

In this handy little volume of 140 pages we have the substance of the author's lectures to his students upon the important subject of tumors. The colloquial style of the clinic room has been retained and will be fully appreciated by the reader. The subject matter of the seven chapters has been brought thoroughly up to date in this edition. The classification of morbid growths is much simplified and aids the reader in his study of the subject.

The subject of cystic tumors, which is often neglected in similar works, is given sufficient prominence and cysts are described as they occur in various parts of the body.

Only the general pathology, clinical history and treatment of tumors is considered at length, yet the author finds space to give most valuable discussions of the causation and diagnosis of neoplasms.

The writer has drawn freely from his own extensive clinical experience. The illustrations also are very judiciously selected and have the special merit, in nearly every case, of being original. This little volume should find a place in every doctor's pocket, and will in spare moments increase and fix his knowledge of the pathology, diagnosis and proper treatment of tumors.

PARKER.

THE ESSENTIALS OF HISTOLOGY, DESCRIPTIVE AND PRACTICAL. For the Use of Students. By E. A. Schaefer, LL.D., F. R. S., Jodrell Professor of Physiology in University College, London; Editor of the Histological portion of Quain's "Anatomy." New (fifth) edition, revised and enlarged, with 392 illustrations. Lea Bros. & Co.

In Schaefer's book the reviewer recognizes an old friend. It seems to be the histological outgrowth of

"Histology and the Microscope," from the same author, which appeared in 1877. The former book, with its later editions, is still a standard work, and this book has passed five editions, and its every birthday has recorded its many excellencies in both text and wealth of illustration.

It is intended for the student, and the most critical cannot affirm that a better one for the beginner is elsewhere printed. Its text is unexcelled in clear, careful and concise statement. It has 392 illustrations, which are without exception most clearly drawn and perfectly printed. One is particularly drawn to the concise yet quite complete histology of the nervous system, and both wonders and admires the genius of the teacher so manifest on every page who conveys so much in so small a space.

The illustrious author is to be congratulated on this his last contribution in a field where his erudition has long ago made him famous.

ALDRICH.

MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book specially adapted for Students of Pharmacy and Medicine. By W. Simon, Ph. D., M. D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore; Professor of Chemistry in the Maryland College of Pharmacy. New (sixth) edition. In one 8vo. volume of 532 pages, with 46 engravings and 8 colored plates, illustrating 64 of the most important chemical tests. Price, Cloth, \$3.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The rapid publication of six editions of this now standard treatise speaks well for the judgment of the instructor and student in their selection.

The author has succeeded, as only the busy instructor can, in giving to his students a large amount of thoroughly reliable matter in clear-cut, brief, still comprehensive style. This he has kept within reasonable page limits without sacrificing a liberal and judicious distribution of the matter.

Even the expert analyst will consult the admirably gotten-up test colors, which cannot fail to be of valuable service to the student and render it a manual particularly suited for self-instruction.

Few works of its size or even larger will meet the demands of so varied a class of students, either as a text-book or one of reference, and we believe it will continue on its road of popularity which it deserves.

SPENZER.

PRELIMINARY REPORT OF AN INVESTIGATION OF RIVERS AND DEEP GROUND WATERS OF OHIO AS SOURCES OF PUBLIC WATER SUPPLIES. By the State Board of Health, 1897-1898.

A volume of 260 pages, giving, (1) "A report on stream pollution," by Allen Hazen, engineer; (2) "Report of chemical examination of the waters of the Scioto, Olentangy and Mahoning rivers, by Professor Lord; (3) "Bacteriology in examination of same," by Professor Bleile; (4) "Stream gaugings and source of pollution," by C. N. Brown; (5) "Rock waters and flowing wells of Ohio," by Professor Orton; (6) "Drainage map of Ohio," Hazen.

The reports are judiciously supplied with charts. The methods used are standard and good, thoroughly up-to-date, and some of them in advance of some now generally in use. The work seems to be carefully done and to have been entrusted to reliable hands, and must prove of great value to the scientific and laity alike. Aside from a few typographical errors, the compilation seems to be thoroughly reliable and useful.

SPENZER.

PAMPHLETS RECEIVED.

In most cases the pamphlets here mentioned will be forwarded to the interested reader by addressing the author and enclosing a stamp. Kindly mention *THE GAZETTE*.

R. HARVEY REED, M. D., Rock Springs, Wyoming: POST-OPERATIVE INSANITY; from *Journal American Medical Association*.

N. S. DAVIS, JR., A. M., M. D., Chicago: DIABETIC GANGRENE; from *Journal American Medical Association*. CHICAGO SANITARY FLOUR FOR CERTAIN DYSPEPTICS AND DIABETICS; from *Chicago Medical Recorder*.

LEARTUS CONNOR, A. M., M. D., Detroit, Mich.: DISEASES OF THE LACHRYMAL PASSAGES—THEIR CAUSES AND MANAGEMENT; from *Journal American Medical Association*. PREVENTION OF DISEASES NOW PREYING UPON THE MEDICAL PROFESSION; from *Bulletin American Academy of Medicine*.

ROBERT C. KENNER, A. M., M. D., Louisville, Ky.: TREATMENT OF TYPHOID FEVER WITH CLINICAL REPORTS; from *New Albany Medical Herald*.

LOUIS H. ADLER, JR., M. D., Philadelphia, Pa.: SOME REMARKS CONCERNING RECTAL AFFECTIONS, WITH ESPECIAL REFERENCE TO THE PHYSICAL EXPLORATIONS OF THE RECTUM; from *Therapeutic Gazette*.

CHARLES P. NOBLE, M. D.: CONSERVATIVE TREATMENT OF FIBROID TUMORS BY MYOMECTOMY. THE CONSERVATIVE TREATMENT OF PELVIC SUPPURATION OF PUERPERAL ORIGIN; from *Philadelphia Medical Journal*.

WILLIAM CHEATHAM, M. D., Louisville, Ky : ORTHOFORM AND EXTRACT OF SUPRA-RENAL GLANDS; from *American Practitioner and News*. GLAUCOMA WITH DETACHMENT OF RETINA; from *Annals of Ophthalmology*.

W. H. HAYNES, M. D., Brooklyn, N. Y.: COMPLICATIONS AFFECTING THE NERVOUS SYSTEM AND TREATMENT OF TYPHOID FEVER; from *Brooklyn Medical Journal*.

J. M. G. CARTER, M. A., M. D., Sc. D., Ph. D., Waukegan, Ill.: ADVANCES IN THE DOMAIN OF PREVENTIVE MEDICINE.

Pamphlets received upon the subject of KYROFINÉ, from C. BEISHOFF & Co., of New York, written and published as follows:

JOHN H. CURTIS, M. D., Chicago; reprint from *Therapeutic Gazette*.

M. A. SHLENKER, M. D., Providence, R. I.; reprint from *Atlantic Medical Weekly*.

GEORGE FRANK BUTLER, Ph. G., M. D.; reprint from *Chicago Clinic*.

ROBERT C. KENNER, A. M., M. D., Louisville, Ky.; reprint from *New Albany Medical Herald*.

ARTHUR E. MINK, M. D., St. Louis, Mo.; reprint from *Tri-State Medical Journal*.

EUGENE BACK. (Observations made at the Clinic of Prof. Eichorst in Zurich); reprint from *New England Medical Monthly*.

ANNOUNCEMENT OF NEW BOOKS AND NEW EDITIONS, issued by Lea Brothers & Co., Philadelphia.

THE TWENTY-SIXTH ANNUAL REPORT OF THE PONASANG MISSIONARY HOSPITAL, Foo Chow, China, for nine months, ending Dec. 31, 1897; in charge of H. M. Kinnear, M. D., of the A. B. C. F. M.

The following pamphlets have been received from American Public Health Association, for 1898,—Secretary, C. O. Probst, M. D.: ANNOUNCEMENT OF THE TWENTY-SIXTH ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION to be held at Ottawa, Canada, Sept. 27-30, 1898. SANITARY AUTHORITIES AND ASSOCIATIONS OF THE UNITED STATES OF AMERICA, THE DOMINION OF CANADA AND THE REPUBLIC OF MEXICO, 1898. REVISED LIST OF MEMBERS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION, 1898.

Notes and Comments.

Dr. and Mrs. J. M. Lewis have returned from their trip to the East.

Dr. and Mrs. L. S. Chadwick have recently returned from a trip to Europe.

Dr. P. Maxwell Foshay has removed his office from the New England Building to No. 89 Euclid avenue.

Dr. W. C. Berlin, of 637 Central Ave., who has been in the service of the army during the present season at Chickamauga, has now left the city for Porto Rico, for a continuation of service upon that island.

Dr. Thaddeus A. Reamy, of Cincinnati, has disposed of his hospital on East Walnut Hills. It will hereafter be known as the Bethesda Hospital. It was purchased by the German Methodist Deaconess' Home.

Dr. Wm. E. Wirt, who has been serving as lieutenant in the United States Navy during the Spanish-American war, has returned to Cleveland, where he will resume the practice of medicine.

Dr. F. A. Todd, recently assistant superintendent of the Ohio State Hospital for the Insane, died at the Presbyterian Hospital in Chicago, Sept. 30, 1898. His remains were taken to Owosso, Mich., for interment. His death is reported to have been due to the bite of a rabid dog. Hydrophobia is a very rare disease, and such well authenticated cases are seldom seen in this country.

Dr. John Ingles, of Chicago, and Miss Theodora Marshall, of Osage City, Kan., were married September 10th. Miss Marshall is a graduate of the College of Emporia, and the past two years has been teaching in the high school of Colorado Springs, Col. The doctor and his wife left on the afternoon train for Pekin, China, where he will have charge of a large hospital which is under the patronage of the Chinese Government.—*Medical Herald*.

In giving chloroform, beware of the patients who fight and struggle. They are the ones who furnish most of the mortality.—*International Journal of Surgery*.

Bleeding Patients. "I had supposed until yesterday, doctor, that the days of bleeding patients were past." "And so they are. What changed your mind?" "The bill you sent me."—*Harper's Weekly*.

The Association of Pennsylvania Railway Surgeons held its annual meeting at the Cleveland Medical Library Building, in this city, on Oct. 11, 1898. Papers of considerable interest, especially to railway surgeons, were read.

Homoeopathy in Cleveland. Since the American Medical College Association has sanctioned the admission of

medical students, and graduates from homœopathic schools, to colleges, members of the association upon essentially the same terms as students from other schools, there has been a constant stream of homœopathic students into the regular schools of this city, and a number of eminent homœopathic practitioners have matriculated and graduated from the regular schools and entered the regular profession.

If we are properly informed, five or six professors of the homœopathic school have resigned their positions this fall and have matriculated in the College of Physicians and Surgeons with the intention of entering the regular profession in the near future.

As a matter of fact the practitioners of homœopathy in this city have been such only in name for many years, and this would seem to be an auspicious time for the entire homœopathic profession to abandon their exclusive title and become regular physicians in name as well as in practice.

Be dignified. A lady may appear like a lady while riding a bicycle just as well as when riding in a carriage. If she does not it is not the fault of the bicycle.—*L. A. W. Bulletin.*

H. S. Fitzgerald, the anatomical and surgical wonder, was present at the meeting of the Cuyahoga County Medical Society the evening of October 6th, and gave an exhibition of his powers for controlling the muscles of the body separately and individually by name, throwing his joints out of place to illustrate the many forms of dislocations, and so forth. He is able, by certain muscular contractions, to cut off the circulation of the blood from portions of the body, and the feats which he performed were certainly very remarkable. Mr. Fitzgerald is over sixty years of age and has been performing similar experiments upon himself for the benefit of the medical profession for many years. He states that his first public exhibition was made at the age of fifteen years. He is able to reduce the dislocations, voluntarily made, but claims that his age is beginning to tell upon him to such an extent that the work is not as easy for him to perform as it was earlier in life. His children have inherited the qualities of their father to some extent, and Mr. Fitzgerald states that one of his daughters, at the age of five, was found sleeping upon her face with her head between her feet, a position which she often takes while at rest.

Conclusions from Clinical and Bacteriological Experiments with Holococain. Dr. R. L. Randolph comes to the following conclusions in a paper published in the Johns Hopkins Hospital Bulletin:

1. No difference was observed in holococain anesthesia from that produced from cocaine.
2. There was an absence of drying of the cornea and dessication of its epithelium and dilatation of the pupil, so often present from the use of cocaine.
3. There was no blurring of vision and no photophobia.
4. A one per cent. solution of holococain has not only an inhibitory effect upon the pus organisms, but these organisms are killed when exposed to a solution of this strength for a certain length of time.

It may be said in conclusion, then, that a solution of holococain of the strength employed in ophthalmic practice possesses distinct germicidal properties, a fact which it is evident enhances the value of this product.

The Care of School-rooms — Periodical Disinfection. The Michigan State Board of Health respectfully recommends to all school boards and other officers and persons having in charge assembly rooms, that they cause to be observed the following methods of care, in the interests of public health:

That the regular care of school-rooms includes sprinkling the floor before sweeping, the subsequent dusting of desks or wiping them with a clean damp cloth, and the airing of the room before its use.

That interchange of books be allowed only under such conditions as render the transmission of disease impossible. That the use of slates be discontinued.

That persons known to be affected with tuberculosis of the lungs, or who persistently cough and expectorate, be denied the privileges of such room, either as a teacher or pupil. That all spitting upon the floor by any person be strictly forbidden, and that proper conveniences for receiving sputa be supplied.

That, at least once a year, the room and contents be thoroughly disinfected, the woodwork and floor washed with an antiseptic solution, the walls whitewashed, and the plumbing and ventilating inspected.

Office of the State Board of Health, }
Lansing, Mich., July, 1898. }

The cleaning of Santiago. "I have had," writes General Wood, "a very difficult position from a sanitary point of view and not an altogether easy one from a military and civil standpoint. When we came into the city the sanitary situation was something frightful. There were a great many unburied dead in the houses, between 2,000 and 3,000 wounded and sick, and a great horde of half-famished and sick people, nearly 20,000 in number, who had just returned from El Caney, where they had gone during the siege. The water supply of the city had been cut off; there was no water to be obtained except from cisterns and a few wells, and the streets were full of dead animals and all sorts of filthy materials. I had to start in from the bottom and repair the waterworks. Then came the removal of the dead. Some of these were burned, because the number was so great and decomposition had advanced to such an extent that they could not be buried. Burning is not uncommonly practised here during the epidemic season.

"We had yellow fever all around us and about twenty cases in the Spanish military hospital. The civil hospital was full of dying people and public buildings were being used as hospitals. I have a force of about 170 men constantly employed, and at many times have had nearly double this force working day and night to remove the vast amount of indescribable filth which had accumulated in the outhouses and yards, as well as the streets of the city, which is reputed to be one of the most unhealthy and dirty in the world. The death-rate has dropped steadily since we came in and is now about one-fourth of what it was in July. The water system has been put in order and a great many repairs made to it and the supply, although insufficient, is utilized to the greatest advantage.

"I have had to hire doctors for the hospitals, purchase medicine for them, and supply them with beds and bedding and food—in fact, re-establish and take entire charge of them. I have also established a strict system of house inspection and inspection of the streets, and have a disinfecting department as well as a cleaning department."—*Cleveland Plain Dealer*.

The Annual Meeting of the Medical Tribunal was held in the Grand Army Hall, Alliance, O., Tuesday, Oct. 18, 1898, at 10 A. M. This was the third annual joint meeting of the Northeastern Ohio, Eastern Ohio, and Union Medical Societies. Officers: President, Dr. G. W. Brooke,

Ellsworth; vice-presidents, Dr. A. B. Campbell, Canal Fulton; Dr. H. W. Nelson, Steubenville; Dr. A. L. Cope, Winona; secretary, Dr. M. J. Lichty, Alliance.

PROGRAM.

Morning Session.

Address by the president, Dr. G. W. Brooke.

Papers: "Why God Made Ice," Dr. T. B. Marquis, Lisbon.

"A New Method of Abdominal Hysterectomy," Dr. E. G. Myers, Canton.

"Tetanus," Dr. J. F. Purviance, Steubenville.

"Report of a Case of Craniotomy and Cæsarean Section," Dr. A. L. Cope, Winona.

Afternoon Session.

Election of officers.

Papers: "Appendicitis," Dr. W. M. Calhoun, East Liverpool.

"Criticism on the Usual Wound Dressings," Dr. J. H. Tressel, Alliance.

"The Early Signs of Malignancy," Dr. C. B. Parker, Cleveland.

"Fees in Medical and Surgical Cases—Why the Difference?" Dr. S. J. Wright, Tallmadge.

Report of Cases.

Formal Opening. The formal opening of the library of the Cleveland Medical Library Association to the profession and its friends, was held Thursday, Oct. 13, 1898. The building was open for inspection in the afternoon from 3 until 5, and from 7 until 10 in the evening. At 7:30 P. M., a short programme, appropriate to the occasion, was given, consisting of music and brief addresses by gentlemen of prominence.

Another Medical College. Some unknown New York millionaire has made a gift of one million six hundred thousand dollars to Cornell University with which to start another medical college in New York City. Land has been bought on First avenue and Twenty-seventh street, and the plans are ready for the erection of a six-hundred-thousand-dollar building.—*American Medico-Surgical Bulletin.*

Hospital ship relief. The total cost of purchasing and equipping the hospital ship relief has been \$1,250,000.—*The Wisconsin Medical Recorder.*

The Parisian wits are reviving an old story about the wonderful cure from deafness of a patient who was recommended to go to hear "Lohengrin" and to sit near the

orchestra, by the trombones. The doctor accompanied his patient and sat beside him. All of a sudden, while the noise of the instruments was at its loudest, the deaf man found he could hear.

“ Doctor,” he almost shrieked, “ I can hear.”

The doctor took no notice.

“ I tell you, doctor,” repeated the man, in ecstasy, “ you have saved me. I have recovered my hearing.”

Still the doctor was silent. He had become deaf himself.—*New York Lancet.*

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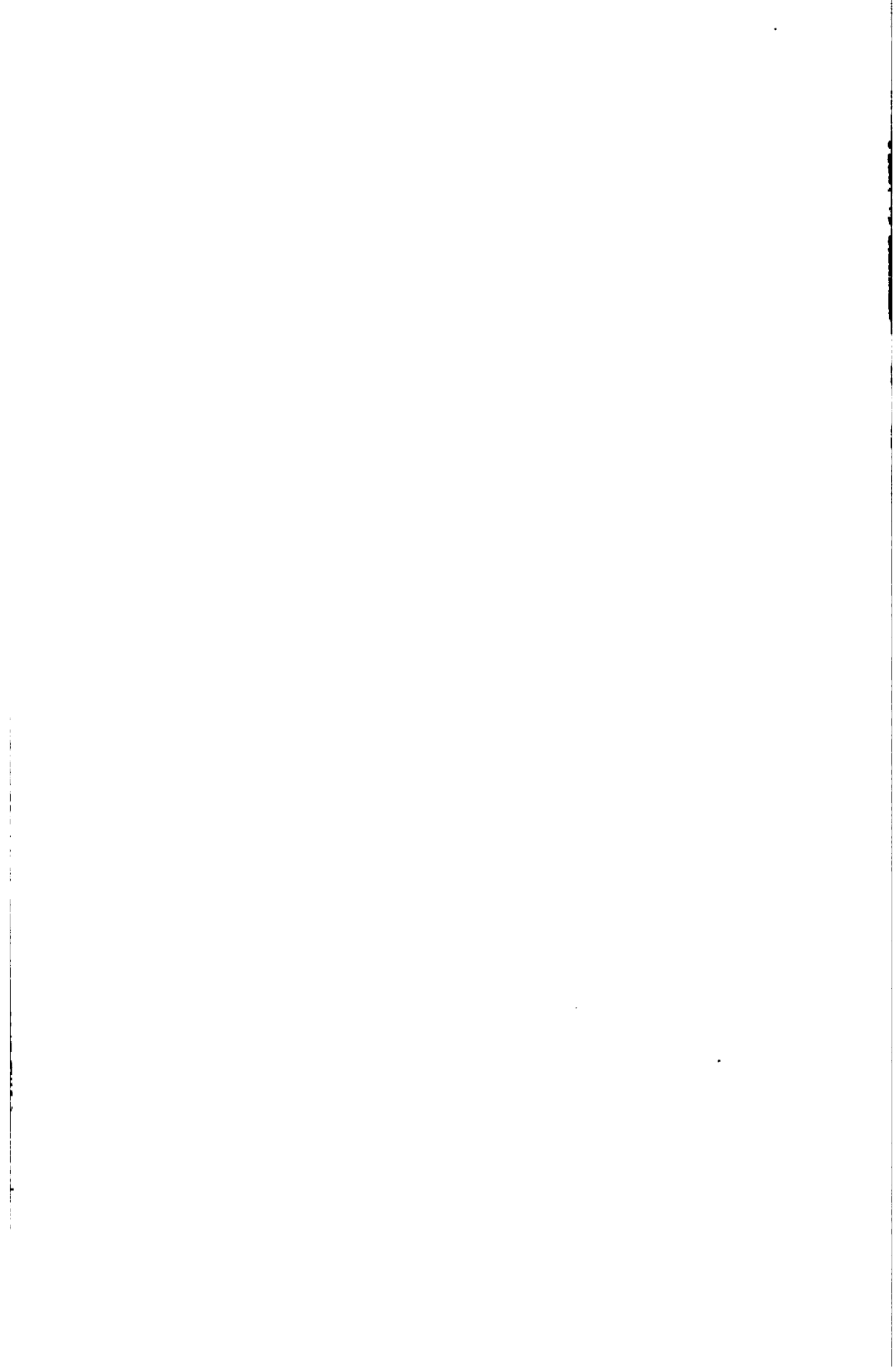
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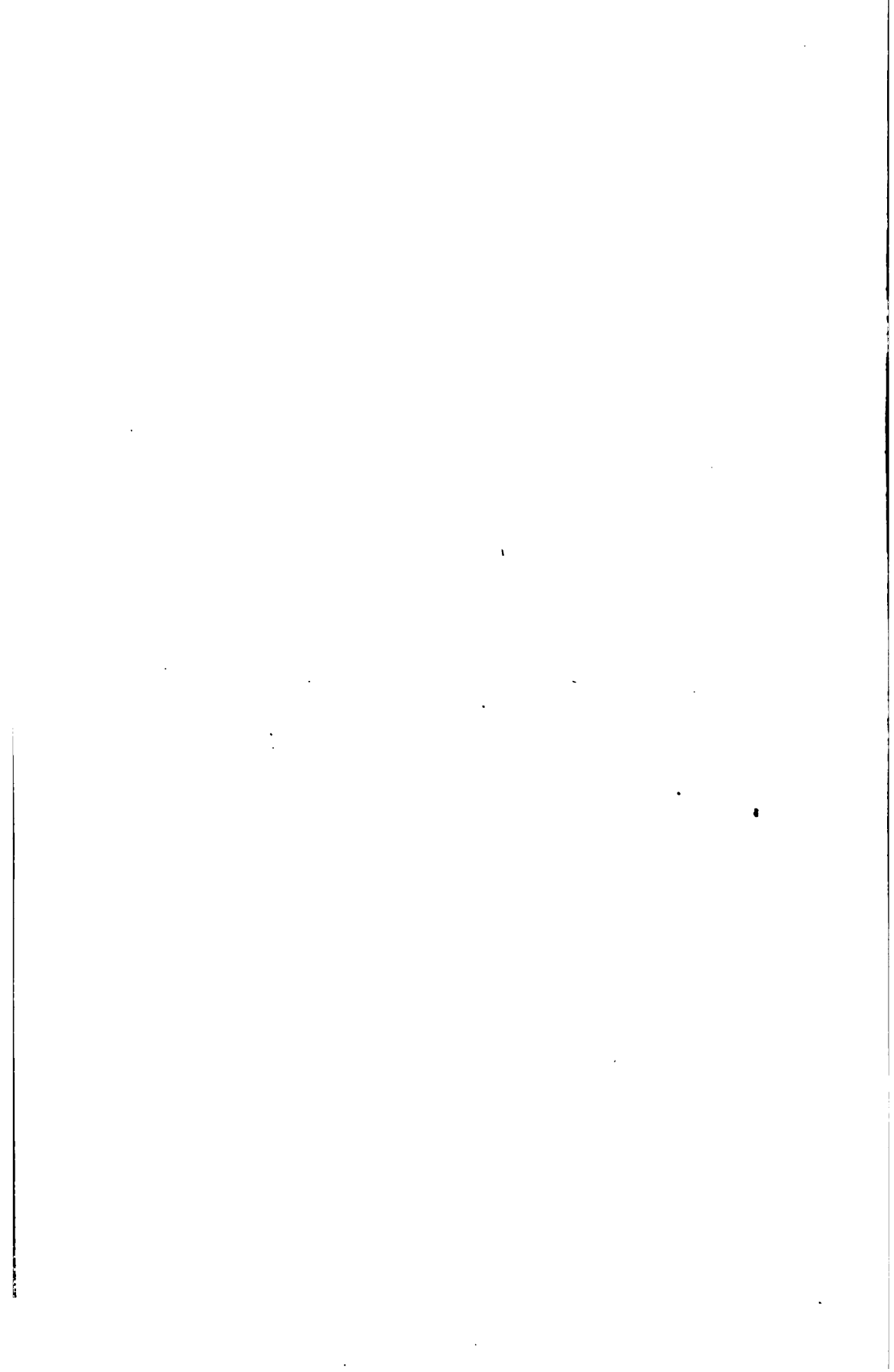
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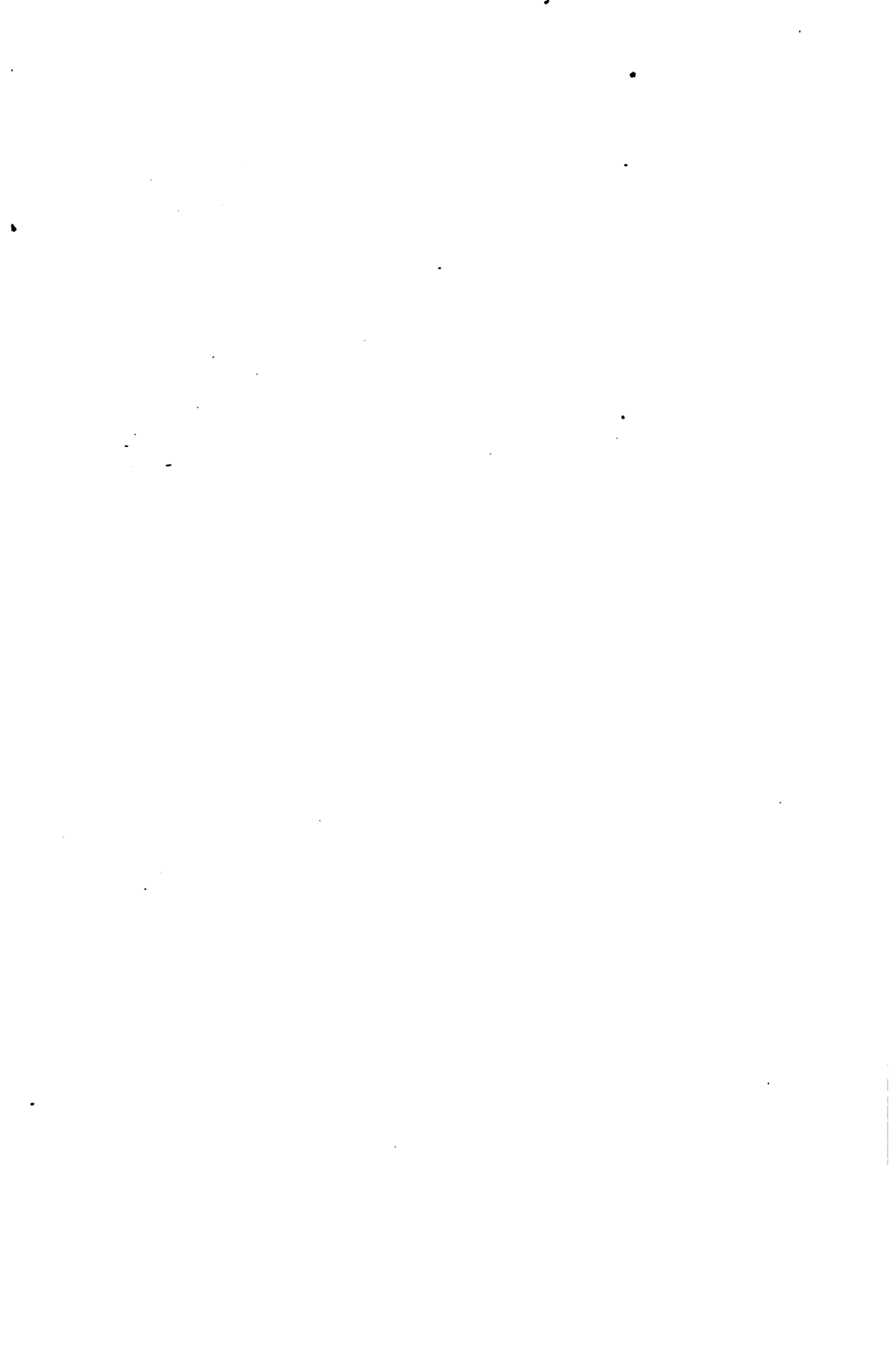


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